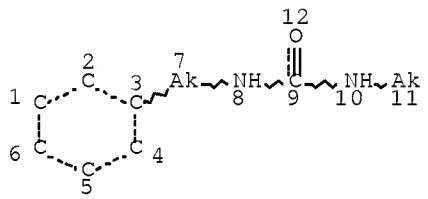
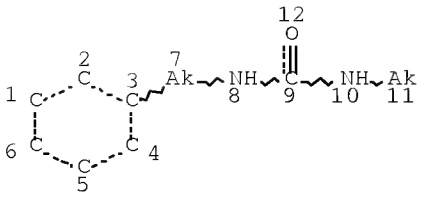
```
=> fil reg
FILE 'REGISTRY' ENTERED AT 14:49:40 ON 12 MAY 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   10 MAY 2009  HIGHEST RN 1145355-82-3
DICTIONARY FILE UPDATES:  10 MAY 2009  HIGHEST RN 1145355-82-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> d que l48
L5              STR
```




```
NODE ATTRIBUTES:
CONNECT IS E1  RC AT  11
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  12

STEREO ATTRIBUTES: NONE
L7         6050 SEA FILE=REGISTRY SSS FUL L5
L10          94 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  26100-51-6/CRN
L13         832 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  79-33-4/CRN
L14        1134 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L7
L15         178 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L10
L16        5859 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L13
L17           3 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L14 AND (L15 OR
                L16)
L18           2 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L14 AND POLYLACTIC
```

ACID?
L20 STR



NODE ATTRIBUTES:
CONNECT IS E1 RC AT 11
DEFAULT MLEVEL IS ATOM
GGCAT IS SAT AT 11
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS X25 C AT 11

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

| | | |
|---|---|---|
| L22 | 5848 | SEA FILE=REGISTRY SUB=L7 SSS FUL L20 |
| L23 | 1313 | SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L22 AND 1/NR |
| L25 | 617 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L23 |
| L33 | 14 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L25 AND MOLD? |
| L34 | 14 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L25 AND (MOLD? OR MOULD?) |
| L35 | 14 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L33 OR L34 |
| L37 | 7 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L25 AND LACTIC ACID? |
| L38 | 8 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L17 OR L18 OR L37 |
| L39 | 19 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L35 OR L38 |
| L40 | 18 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L39 AND (1840-2006)/PRY,AY,PY |
| L41 | 2 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L25 AND (BIODEGRAD? OR BIO DEGRAD?)(3A) MATERIAL? |
| L42 | 18 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L40 OR L41 |
| L45 | 403 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L25(L)PREP/RL |
| L46 | 12 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L45 AND (PLASTIC? OR POLYMER?)/SC,SX |
| L47 | 12 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L46 AND (1840-2006)/PRY,AY,PY |
| L48 | 30 | SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L42 OR L47 |

=> fil hcap
FILE 'HCAPLUS' ENTERED AT 14:49:48 ON 12 MAY 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 12 May 2009 VOL 150 ISS 20
FILE LAST UPDATED: 10 May 2009 (20090510/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l48 1-30 ibib ed abs hitstr hitind

L48 ANSWER 1 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:348009 HCAPLUS Full-text
DOCUMENT NUMBER: 148:356496
TITLE: Lactic acid polymer ionomers, their manufacture, and resin compositions based on them
INVENTOR(S): Nakano, Masataka
PATENT ASSIGNEE(S): M & S Research and Development Co., Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

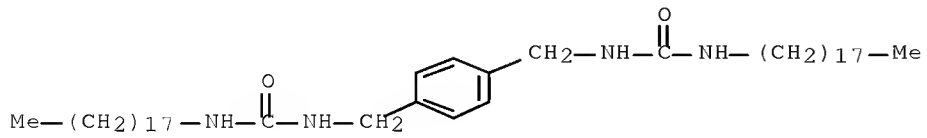
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2008063512 | A | 20080321 | JP 2006-245044 <-- | 20060911 |
| PRIORITY APPLN. INFO.: | | | JP 2006-245044 <-- | 20060911 |

ED Entered STN: 21 Mar 2008
AB Title ionomers X[(OCHMeCO)nNHACO2-]mMm+ (X = H, C1-30 aliphatic or aromatic 1-acyl; A = C1-6 amino acid residue; M = metal of Groups 1-13 and Periods 2-4 in the long form periodic table; n = 100-3000; m = 1-4) are manufactured by melt-kneading poly(lactic acid) (I) with 0.0001-0.05 mol/mol-I (as repeating unit) of amino acid compds. and 0.01-1 mol/amino acid compound of aliphatic or aromatic carboxylic acid metal salts. Title compns. contain 0.1-40 phr crystal nucleating agents. Thus, I (Lacea H 400) 700, glycine 0.73, and Zn(OAc)2 0.89 part were blended, melt-kneaded, and pelletized to give an ionomer showing recrystn. temperature 96.7°, heat of recrystn. 2.1 J/g, m.p. 168°, crystallization temperature 90.4°, heat of crystallization 10.5 J/g, and good tensile strength of its injection-molded product.
IT 65792-44-1, Hackreen SX
(crystal nucleating agent; manufacture of lactic acid

polymer ionomers with good crystallinity and mech. strength)

RN 65792-44-1 HCAPLUS

CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



CC 37-3 (Plastics Manufacture and Processing)

ST polylactic acid amide ionomer crystallinity improvement; glycine transamidation polylactic acid ionomer tensile strength

IT Polyesters, preparation
(ionomers; manufacture of lactic acid polymer ionomers with good crystallinity and mech. strength)

IT Ionomers
(polyesters; manufacture of lactic acid polymer ionomers with good crystallinity and mech. strength)

IT 14807-96-6, Micro Ace P 6, uses 65792-44-1, Hackreen SX
(crystal nucleating agent; manufacture of lactic acid polymer ionomers with good crystallinity and mech. strength)

IT 56-40-6DP, Glycine, reaction products with poly(lactic acid), metal salts 56-41-7DP, Alanine, reaction products with poly(lactic acid), metal salts 127-09-3DP, Sodium acetate, reaction products with poly(lactic acid) amino acid amides 150-13-0DP, p-Aminobenzoic acid, reaction products with poly(lactic acid), metal salts 557-05-1DP, Zinc stearate, reaction products with poly(lactic acid) amino acid amides 557-34-6DP, Zinc acetate, reaction products with poly(lactic acid) amino acid amides 26100-51-6DP, Lactic acid homopolymer, reaction products with amino acids, metal salts 1012794-32-9P 1012794-33-0P 1012794-34-1P 1012794-35-2P
(manufacture of lactic acid polymer ionomers with good crystallinity and mech. strength)

L48 ANSWER 2 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1090882 HCAPLUS Full-text

DOCUMENT NUMBER: 147:407576

TITLE: Producing polymer compounds useful for pigment dispersing agent having good dispersibility and dispersion stability, a pigment dispersion composition, and a photocurable composition therewith

INVENTOR(S): Takahashi, Hidenori; Osada, Shuichiro

PATENT ASSIGNEE(S): Fujifilm Corporation, Japan

SOURCE: PCT Int. Appl., 134 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2007108367 | A1 | 20070927 | WO 2007-JP54948 <-- | 20070313 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| JP 2007277514 | A | 20071025 | JP 2006-269707 <-- | 20060929 |
| EP 2006310 | A2 | 20081224 | EP 2007-738420 <-- | 20070313 |
| R: DE, GB | | | | |
| CN 101405310 | A | 20090408 | CN 2007-80009434 <-- | 20080917 |
| KR 2009007705 | A | 20090120 | KR 2008-725198 <-- | 20081015 |
| PRIORITY APPLN. INFO.: | | | JP 2006-75434 A <-- | 20060317 |
| | | | JP 2006-75558 A <-- | 20060317 |
| | | | JP 2006-269707 A <-- | 20060929 |
| | | | WO 2007-JP54948 W | 20070313 |

ED Entered STN: 28 Sep 2007

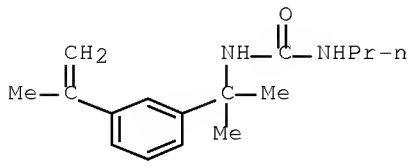
AB The compds. are represented by a formula (A1-R2)n-R1-(P1)m, wherein R1=(m+n) valent organic connecting group; R2=mono- or 2 valent organic connecting group; A1=organic pigment group, heterocyclic group, acidic group, basic nitrogen-containing group, urea, urethane, coordinatable oxygen-containing group, C4> hydrocarbon group, alkoxysilyl, epoxy, isocyanate, and hydroxy group; m=1-8, n=2-9, m+n=3-10; and P1=polymer. Thus, 7.83 parts dipentaerythritol hexakis(3-mercaptopropionate) and 15.57 parts 10-[(ethenylphenyl)methyl]-9(10H)-acridinone were reacted in DMF in the presence of V 65 (radical initiator) at 70° for 3 h to give a mercaptan compound B (chain transfer agent), 46.8 parts 20% of which was mixed with 20 parts MMA, added with AIBN, heated at 80° for 3 h to give a title polymer, 50 parts of which was mixed with 90 parts Pigment Red 254, 10 parts Pigment Red 177, and 850 parts 1-methoxy-2-propylacetate to give a title pigment dispersion (R). Dipentaerythritol hexaacrylate 80, 4-[o-bromo-p-N,N-di(ethoxycarbonyl)aminophenyl]-2,6-di(trichlorometh yl)-s-triazine 30, 40% benzyl methacrylate-methacrylic acid copolymer solution in propylene glycol monomethyl ether acetate 200, 1-methoxy-2-propylacetate 490, and R 19 parts were mixed to give a photocurable color resist.

IT 694487-75-7DP, reaction product with dipentaerythritol hexakis(3-mercaptopropionate)
(production of polymer compds. useful for pigment dispersing agent having good dispersibility and dispersion stability, a pigment dispersion composition, and a photocurable composition therewith)

RN 694487-75-7 HCAPLUS

CN Urea, N-[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]-N'-propyl- (CA

INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 97-65-4DP, reaction product with dipentaerythritol hexakis(3-mercaptopropionate), preparation 7575-23-7DP, Pentaerythritol tetrakis(3-mercaptopropionate), reaction product with double bond-containing functional compound 13167-25-4DP, reaction product with dipentaerythritol hexakis(3-mercaptopropionate) 25359-71-1DP, Dipentaerythritol hexakis(3-mercaptopropionate), reaction product with double bond-containing functional compound 694487-75-7DP, reaction product with dipentaerythritol hexakis(3-mercaptopropionate) 950861-38-8P 950861-39-9P 950861-41-3P 950861-42-4P 950861-43-5P 950861-44-6P 950861-45-7P 950861-46-8P 950861-48-0P 950861-49-1DP, reaction product with pentaerythritol tetrakis(3-mercaptopropionate) 950861-50-4P 950861-51-5P 950861-52-6P 950861-53-7P 950861-54-8P 950861-55-9P 950861-56-0P 950861-57-1P 950861-58-2P 950890-17-2P 950890-18-3P
(production of polymer compds. useful for pigment dispersing agent having good dispersibility and dispersion stability, a pigment dispersion composition, and a photocurable composition therewith)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 3 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:608712 HCAPLUS Full-text
DOCUMENT NUMBER: 145:84148
TITLE: Biodegradable resin compositions for molded articles with good impact and heat resistance, tensile properties, transparency, and processability
INVENTOR(S): Hashimoto, Yoshihiko; Aoyama, Taizo; Nakamura, Nobuo; Suzuki, Noriyuki
PATENT ASSIGNEE(S): Kaneka Corporation, Japan
SOURCE: PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

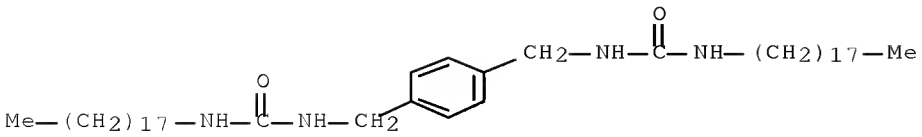
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2006064846 | A1 | 20060622 | WO 2005-JP22960 <-- | 20051214 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,

CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM,
KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG,
MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT,
RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,
IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

| | | | | |
|---|---|---|---|---|
| EP 1826241 | A1 | 20070829 | EP 2005-816408 <-- | 20051214 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| CN 101080465 | A | 20071128 | CN 2005-80043164 <-- | 20051214 |
| US 20080033077 | A1 | 20080207 | US 2007-720277 <-- | 20070712 |
| PRIORITY APPLN. INFO.: | | | JP 2004-363387 A <-- | 20041215 |
| | | | JP 2004-363388 A <-- | 20041215 |
| | | | JP 2005-128064 A <-- | 20050426 |
| | | | JP 2005-128065 A <-- | 20050426 |
| | | | WO 2005-JP22960 W <-- | 20051214 |

OTHER SOURCE(S): MARPAT 145:84148
ED Entered STN: 23 Jun 2006
AB A biodegradable polymer derived from a plant which has pos. immobilized global carbon dioxide is used. The resin compns. comprise (A) a biodegradable aliphatic polyester polymer and (B) ≥1 copolymer selected from a composite rubber graft copolymer and a core-shell graft copolymer. Alternatively the resin compns. comprise (A) a biodegradable aliphatic polyester polymer and (B) ≥1 compound selected from a sorbitol compound having a specific structure and a substituted urea compound having a urea bond. Thus, tetraethoxysilane 1, γ-methacryloyloxypropyldimethoxymethylsilane 1.5, and octamethylcyclotetrasiloxane 97.5 parts were condensated, 10 parts of the resulting rubber latex was mixed with 65 parts Bu acrylate and 0.65 parts allyl methacrylate and polymerized to give a composite rubber, 75 parts of which was graft-polymerized with 20 parts Me methacrylate and 5 parts Bu acrylate, 17 parts of the resulting graft copolymer was formulated with 93 parts a 3-hydroxybutyrate-3-hydroxyhexanoate copolymer and 22 parts talc and injection-molded to give a test piece with Izod impact strength 145 J/m and heat distortion temperature 100°.
IT 65792-44-1, Hackreen SX
(crystal nucleating agent; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
RN 65792-44-1 HCAPLUS
CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 39

ST biodegradable resin compn molded article impact heat resistance; tensile property transparency processability; graft acrylic polysiloxane silicate hydroxybutanoic hydroxyhexanoic acid copolymer blend

IT Silicone rubber, properties
(Kaneka Silyl M 400, blend with polyesters; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Silicone rubber, uses
(acrylic, graft, blend with polyesters; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Polysiloxanes, preparation
(acrylic-silicate-, graft, blend with polyesters; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Silicone rubber, preparation
(acrylic-silicate-, graft, intermediate; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Synthetic rubber, preparation
(acrylic-silicate-siloxane, graft, intermediate; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Polyesters, uses
(aliphatic, blend with graft copolymers; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Amides, uses
(aliphatic, crystal nucleating agents; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Acrylic rubber
(allyl methacrylate-Bu acrylate, intermediate; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Acrylic rubber
Silicone rubber, preparation
(allyl methacrylate-Bu acrylate-γ-methacryloyloxypropyldimethoxymethylsilane-octamethylcyclotetrasiloxane-tetraethoxysilane, graft, intermediate; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)

IT Aeromonas caviae
Cupriavidus necator

(biodegradable material source;
biodegradable resin compns. for molded articles
with good impact and heat resistance, tensile properties,
transparency, and processability)

IT Crystal nucleating agents
Plastic films
(biodegradable resin compns. for molded articles with
good impact and heat resistance, tensile properties, transparency,
and processability)

IT Molded plastics, properties
(biodegradable resin compns. for molded articles with
good impact and heat resistance, tensile properties, transparency,
and processability)

IT Biodegradable materials
(blend with graft copolymers; biodegradable resin compns. for
molded articles with good impact and heat resistance,
tensile properties, transparency, and processability)

IT Polyesters, properties
(blend with graft copolymers; biodegradable resin compns. for
molded articles with good impact and heat resistance,
tensile properties, transparency, and processability)

IT Rubber, uses
(blend with polyesters; biodegradable resin compns. for
molded articles with good impact and heat resistance,
tensile properties, transparency, and processability)

IT Ureas
(crystal nucleating agents; biodegradable resin compns. for
molded articles with good impact and heat resistance,
tensile properties, transparency, and processability)

IT Acrylic rubber
(graft, blend with polyesters; biodegradable resin compns. for
molded articles with good impact and heat resistance,
tensile properties, transparency, and processability)

IT Impact-resistant materials
(heat-resistant; biodegradable resin compns. for
molded articles with good impact and heat resistance,
tensile properties, transparency, and processability)

IT Heat-resistant materials
Transparent materials
(impact-resistant; biodegradable resin compns. for
molded articles with good impact and heat resistance,
tensile properties, transparency, and processability)

IT Silicone rubber, preparation
(methacryloyloxypropyldimethoxymethylsilane-
octamethylcyclotetrasiloxane-tetraethoxysilane, intermediate;
biodegradable resin compns. for molded articles with good
impact and heat resistance, tensile properties, transparency, and
processability)

IT Polymer blends
(polyester-graft copolymer blends; biodegradable resin compns. for
molded articles with good impact and heat resistance,
tensile properties, transparency, and processability)

IT Acrylic rubber
(silicate-siloxane-, graft, intermediate; biodegradable resin
compns. for molded articles with good impact and heat
resistance, tensile properties, transparency, and processability)

IT Acrylic rubber
(siloxane-, graft, blend with polyesters; biodegradable resin
compns. for molded articles with good impact and heat
resistance, tensile properties, transparency, and processability)

IT Impact-resistant materials
(transparent; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
IT 43136-14-7, Hackreen SM
(Hackreen SM, crystal nucleating agent; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
IT 508233-68-9P
(biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
IT 129669-62-1P, Allyl methacrylate-butyl acrylate-γ-methacryloyloxypropyldimethoxymethylsilane-methyl methacrylate-octamethylcyclotetrasiloxane-tetraethoxysilane graft copolymer 891501-16-9P
(blend with biodegradable polymer; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
IT 147398-31-0P, 3-Hydroxybutanoic acid-3-hydroxyhexanoic acid copolymer
(blend with graft copolymer; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
IT 19046-64-1, Gel All-D 22214-23-9, Hackreen SH 65792-44-1, Hackreen SX 80124-42-1, NC 4 81541-12-0, Gel All-MD
(crystal nucleating agent; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
IT 28805-02-9 56361-96-7, Bis(p-chlorobenzylidene)sorbitol 91835-70-0, Xylylene bisstearylurea
(crystal nucleating agents; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
IT 30231-49-3P, Butyl acrylate-butyl methacrylate-methacrylic acid copolymer
(modifier for rubber particle aggregation; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
IT 61488-62-8P, Allyl methacrylate-butyl acrylate copolymer 142280-86-2P, γ-Methacryloyloxypropyldimethoxymethylsilane-octamethylcyclotetrasiloxane-tetraethoxysilane copolymer 172502-14-6P
(rubber, intermediate; biodegradable resin compns. for molded articles with good impact and heat resistance, tensile properties, transparency, and processability)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 4 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:611075 HCAPLUS Full-text
DOCUMENT NUMBER: 143:116517
TITLE: Lactic acid polymer stereocomplex compositions and their moldings
INVENTOR(S): Ouchi, Makoto; Okamoto, Hirotaka; Nakano, Mitsuru; Usuki, Arimitsu; Kanamori, Kenji; Okuyama, Hisashi; Yamashita, Seiji; Kageyama, Hiroshi
PATENT ASSIGNEE(S): Toyota Central Research and Development Laboratories Inc., Japan; Toyota Motor Corp.

SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2005187630 | A | 20050714 | JP 2003-430455 <-- | 20031225 |
| WO 2005063885 | A1 | 20050714 | WO 2004-JP19673 <-- | 20041221 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CN 1898327 | A | 20070117 | CN 2004-80039034 <-- | 20041221 |
| US 20080097074 | A1 | 20080424 | US 2006-584471 <-- | 20060831 |

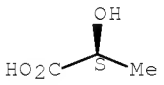
PRIORITY APPLN. INFO.: JP 2003-430455 A 20031225 <--
WO 2004-JP19673 W 20041221 <--

OTHER SOURCE(S): MARPAT 143:116517
ED Entered STN: 15 Jul 2005
AB The compns. comprise lactic acid polymers and aromatic urea compds. C6H6-m(R1NHCONHR2)m (R1 = C1-10 alkylene; R2 = C 1-25 alkyl; m = 1-6). Thus, a composition containing D-lactide homopolymer 0.5, PLLA 5400 [poly(L-lactic acid)] 0.5, and Hackreen SX (xylylene bisstearylurea) 0.01 g was cast into a film showing improved crystallization speed and crystallinity.
IT 26811-96-1
(assumed monomers, stereocomplex; lactic acid polymer stereocomplex compns. and their moldings)
RN 26811-96-1 HCAPLUS
CN Propanoic acid, 2-hydroxy-, (2S)-, homopolymer (CA INDEX NAME)

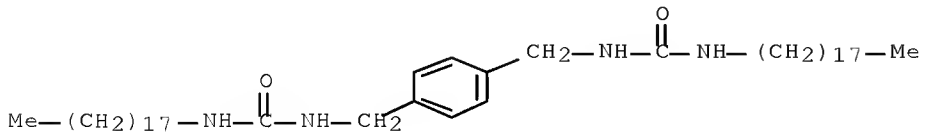
CM 1

CRN 79-33-4
CMF C3 H6 O3

Absolute stereochemistry. Rotation (+).



IT 65792-44-1, Hackreen SX
(crystallization accelerator; lactic acid polymer stereocomplex compns. and their moldings)
RN 65792-44-1 HCAPLUS
CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)

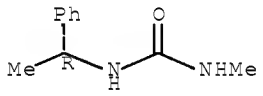


IC ICM C08L067-04
ICS C08J005-00; C08K005-21
CC 38-3 (Plastics Fabrication and Uses)
ST lactic acid polymer stereocomplex molding crystn biodegradable; crystn agent xylylene bisstearylurea polylactide blend
IT Biodegradable materials
Crystal nucleating agents
(lactic acid polymer stereocomplex compns. and their moldings)
IT Molded plastics, uses
(lactic acid polymer stereocomplex compns. and their moldings)
IT Polyesters, uses
Polymer blends
(stereocomplex; lactic acid polymer stereocomplex compns. and their moldings)
IT 26811-96-1
(assumed monomers, stereocomplex; lactic acid polymer stereocomplex compns. and their moldings)
IT 65792-44-1, Hackreen SX
(crystallization accelerator; lactic acid polymer stereocomplex compns. and their moldings)
IT 26023-30-3P, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 135796-12-2P, D-Lactide-L-Lactide block copolymer
(heptablock, stereocomplex; lactic acid polymer stereocomplex compns. and their moldings)
IT 33135-50-1P, L-Lactide homopolymer 840501-68-0P, D-Lactide-L-Lactide triblock copolymer 840501-69-1P, D-Lactide-L-Lactide pentablock copolymer
(lactic acid polymer stereocomplex compns. and their moldings)
IT 25038-75-9P, D-Lactide homopolymer 26917-25-9P
(stereocomplex; lactic acid polymer stereocomplex compns. and their moldings)
IT 26161-42-2, PLLA 5400
(stereocomplex; lactic acid polymer stereocomplex compns. and their moldings)

L48 ANSWER 5 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:201003 HCAPLUS Full-text
DOCUMENT NUMBER: 143:174087

TITLE: Recycling through depolymerization strategies: the decomposition of polyguanidines
AUTHOR(S): Novak, Bruce M.; Goodwin, Andrew; Kim, Jeongham
CORPORATE SOURCE: Department of Chemistry, North Carolina State University, Raleigh, NC, 27695, USA
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2005), 46(1), 309-310
CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer Chemistry
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
ED Entered STN: 08 Mar 2005
AB In the context of polymers, depolymn. generally has been a phenomenon to be avoided rather than exploited. With some notable exceptions, most polymers thermally decompose to a variety of products including carbonaceous materials, oligomeric waxes or oils, and small mol. weight volatiles. Controlled depolymn. to specific products offers alternatives in recycling strategies, as well as applicability in a range of technologies that includes reversible adhesives, low dielec. materials, and volatile compound storage. We herein report on the quant., thermal depolymn. of polyguanidines to their parent monomer, carbodiimides at low temps. Energetics, kinetics and utility of this process will be discussed.
IT 190389-88-9P
(intermediate; recycling strategies through depolymn. and decomposition of polyguanidines)
RN 190389-88-9 HCAPLUS
CN Urea, N-methyl-N'-[(1R)-1-phenylethyl]- (CA INDEX NAME)

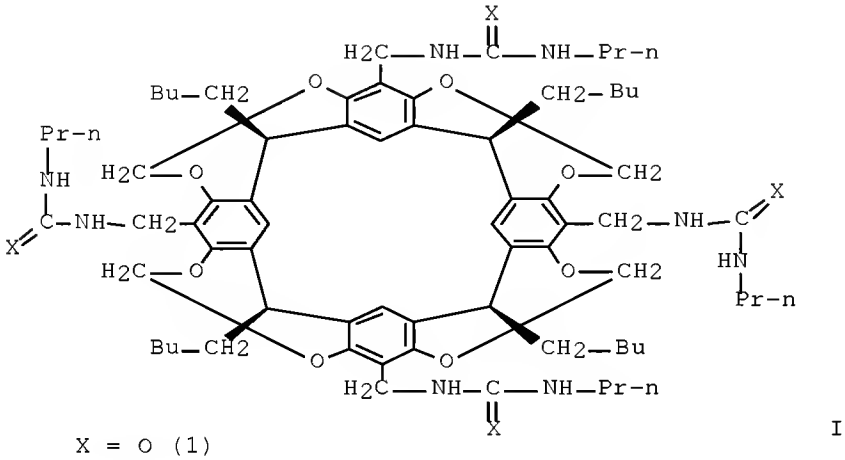
Absolute stereochemistry. Rotation (+).




CC 38-2 (Plastics Fabrication and Uses)
IT 190389-88-9P
(intermediate; recycling strategies through depolymn. and decomposition of polyguanidines)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 6 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:497328 HCAPLUS Full-text
DOCUMENT NUMBER: 141:410578
TITLE: (Thio)urea-functionalized cavitands as excellent receptors for organic anions in polar media
AUTHOR(S): Oshovsky, Gennady V.; Verboom, Willem; Reinhoudt, David N.
CORPORATE SOURCE: Laboratory of Supramolecular Chemistry and Technology, MESA+ Research Institute, University of Twente, Enschede, 7500 AE, Neth.
SOURCE: Collection of Czechoslovak Chemical Communications (2004), 69(5), 1137-1148
CODEN: CCCCAK; ISSN: 0010-0765

PUBLISHER: Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 21 Jun 2004
GI



X = O (1)
X = S (2)

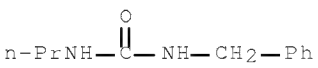
I

AB Ureidocavitand 1 and thioureidocavitand 2 (I) bind in CH3CN organic anions such as acetate, propionate, butyrate, etc. with K values of 2-8 + 105 l mol-1 and 2-9 + 106 l mol-1, resp., as was determined with isothermal microcalorimetry (ITC). Bringing together four (thio)urea binding sites on a mol. platform gives rise to about 2000 times higher binding consts., compared with those of the corresponding single binding sites. Glucose- and galactose-containing thioureidocavitands 5 and 6 bind acetate in 1:1 CH3CN/water with a K-value of 2.15 + 103 l mol-1.

IT 197727-61-0
(acetate encapsulation - comparison; (thio)urea-functionalized cavitands as excellent receptors for organic anions in polar media)

RN 197727-61-0 HCAPLUS

CN Urea, N-(phenylmethyl)-N'-propyl- (CA INDEX NAME)



CC 22-12 (Physical Organic Chemistry)
Section cross-reference(s): 33, 69, 77, 80

IT 3911-44-2 197727-61-0
(acetate encapsulation - comparison; (thio)urea-functionalized cavitands as excellent receptors for organic anions in polar media)

IT 113-21-3, Lactic acid, ion(1-), properties
(guest, 1:2 ureidocavitand/anion, tetabutylammonium salt;

(thio)urea-functionalized cavitands as excellent receptors for organic anions in polar media)

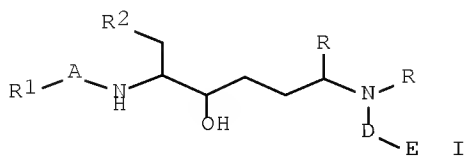
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 7 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:334836 HCAPLUS Full-text
DOCUMENT NUMBER: 138:354240
TITLE: Preparation of α-hydroxyarylbutanamines as inhibitors of aspartyl protease
INVENTOR(S): Or, Yat Sun; Wang, Guoqiang; Rougas, John; Mathews, Jude Elizabeth; Muldoon, Kate Ryan; Boyd, Vincent Alfred; Eckstein, Jens Werner; Riesinger, Steven Wayne
PATENT ASSIGNEE(S): Enanta Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 98 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2003034989 | A2 | 20030501 | WO 2002-US33324 <-- | 20021018 |
| WO 2003034989 | A3 | 20031204 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 20030207934 | A1 | 20031106 | US 2001-7235 <-- | 20011022 |
| US 6696494 | B2 | 20040224 | | |
| AU 2002348465 | A1 | 20030506 | AU 2002-348465 <-- | 20021018 |

PRIORITY APPLN. INFO.:
US 2001-7235 A 20011022 <--
WO 2002-US33324 W 20021018 <--

OTHER SOURCE(S): MARPAT 138:354240
ED Entered STN: 02 May 2003
GI




I

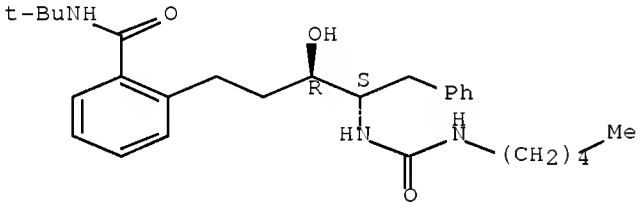
AB The invention relates to α-hydroxybutanamine derivs. I [RCHNR is mono-, bi- or tricyclic aryl or heteroaryl that may be substituted; R1 is (un)substituted (oxa)alkyl, aryl, alkylaryl, or heterocyclyl; R2 is hydrocarbyl, substituted aryl, or heterocyclyl; A is CO, CS, NHCO, SO2, NHSO2, etc.; D is CO or NHCO; E is alkyl, (un)substituted heterocyclyl, or an amino group] and corresponding β,γ-unsatd. derivs. and their pharmaceutically-acceptable salts as inhibitors of aspartyl protease for use in treating diseases, particularly HIV. A scheme details a method starting from N-(tert-butoxycarbonyl)-L-phenylalanine for the production of a compound which is a subgenus of compds. of the invention. (S,R)-2,6-Me2C6H3OCH2CONHCH(CH2Ph)CH(OH)CH2CH2C6H3(Me)CONHBu-t-2,6 showed IC50 < 0.1 μM for inhibition of HIV-1 protease.

IT 521066-35-3P, EP 000890
(EP 000890; preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)

RN 521066-35-3 HCAPLUS

CN Benzamide, N-(1,1-dimethylethyl)-2-[(3R,4S)-3-hydroxy-4-[[(pentylamino)carbonyl]amino]-5-phenylpentyl]- (CA INDEX NAME)

Absolute stereochemistry.

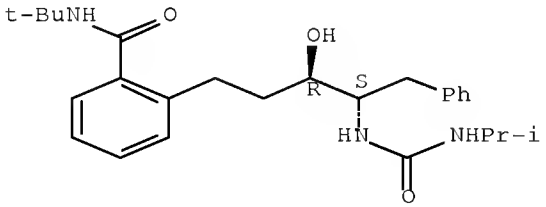



IT 521066-37-5P, EP 000892
(EP 000892; preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)

RN 521066-37-5 HCAPLUS

CN Benzamide, N-(1,1-dimethylethyl)-2-[(3R,4S)-3-hydroxy-4-[[[(1-methylethyl)amino]carbonyl]amino]-5-phenylpentyl]- (CA INDEX NAME)

Absolute stereochemistry.

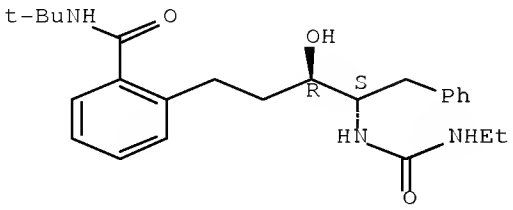



IT 521066-16-0P, EP 000771 521066-36-4P, EP 000891
(preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)

RN 521066-16-0 HCAPLUS

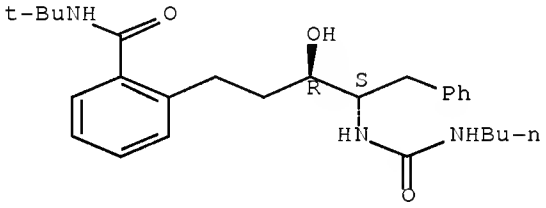
CN Benzamide, N-(1,1-dimethylethyl)-2-[(3R,4S)-4-[[(ethylamino)carbonyl]amino]-3-hydroxy-5-phenylpentyl]- (CA INDEX NAME)

Absolute stereochemistry.



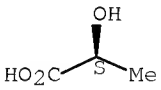

RN 521066-36-4 HCAPLUS
CN Benzamide, 2-[(3R,4S)-4-[[(butylamino)carbonyl]amino]-3-hydroxy-5-phenylpentyl]-N-(1,1-dimethylethyl)- (CA INDEX NAME)

Absolute stereochemistry.




IT 867-56-1
(preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)
RN 867-56-1 HCAPLUS
CN Propanoic acid, 2-hydroxy-, sodium salt (1:1), (2S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).





IC ICM A61K
CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1, 7, 25, 63
IT 521066-35-3P, EP 000890
(EP 000890; preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)
IT 521066-37-5P, EP 000892

(EP 000892; preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)

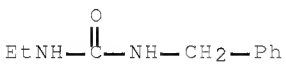
IT 519050-78-3P, EP 001213 519050-87-4P, EP 001234 519050-89-6P, EP 001233 519050-91-0P, EP 001248 519050-93-2P, EP 001232 521065-97-4P, EP 000156 521065-99-6P, EP 000180 521066-02-4P, EP 000241 521066-03-5P, EP 000242 521066-04-6P, EP 000243 521066-05-7P, EP 000244 521066-07-9P, EP 000344 521066-08-0P, EP 000373 521066-11-5P, EP 000763 521066-16-0P, EP 000771 521066-20-6P, EP 000848 521066-23-9P, EP 000857 521066-25-1P, EP 000857 521066-26-2P, EP 000875 521066-27-3P, EP 000876 521066-29-5P, EP 000878 521066-31-9P, EP 000880 521066-36-4P , EP 000891 521066-38-6P, EP 000893 521066-43-3P, EP 000944 521066-44-4P, EP 000945 521066-46-6P, EP 000947 521066-47-7P, EP 000948 521066-49-9P, EP 000951 521066-51-3P, EP 000955 521066-52-4P, EP 000964 521066-53-5P, EP 000966 521066-54-6P, EP 000967 521066-55-7P, EP 000968 521066-56-8P, EP 000969 521066-57-9P, EP 000971 521066-58-0P, EP 000972 521066-59-1P, EP 000973 521066-60-4P, EP 000974 521066-61-5P, EP 000981 521066-62-6P, EP 000987 521066-63-7P, EP 001006 521066-64-8P, EP 001008 521066-66-0P, EP 001012 521066-67-1P, EP 001014 521066-68-2P, EP 001017 521066-69-3P, EP 001020 521066-70-6P, EP 001034 521066-71-7P, EP 001035 521066-72-8P, EP 001036 521066-73-9P, EP 001040 521066-74-0P, EP 001042 521066-75-1P, EP 001047 521066-76-2P, EP 001048 521066-77-3P, EP 001053 521066-79-5P, EP 001154 521066-80-8P, EP 001173 521066-81-9P, EP 001182 521066-82-0P, EP 001185 521066-83-1P, EP 001186 521066-84-2P, EP 001190 521066-85-3P, EP 001192 521066-86-4P, EP 001201 521066-87-5P, EP 001202 521066-88-6P, EP 001203 521066-89-7P, EP 001204 521066-90-0P, EP 001206 521066-91-1P, EP 001210 521066-92-2P, EP 001211 521066-93-3P, EP 001214 521066-94-4P, EP 001215 521066-95-5P, EP 001216 521066-96-6P, EP 001217 521066-97-7P, EP 001218 521066-98-8P, EP 001219 521066-99-9P, EP 001224 521067-00-5P, EP 001225 521067-01-6P, EP 001226 521067-02-7P, EP 001227 521067-03-8P, EP 001228 521067-04-9P, EP 001229 521067-05-0P, EP 001231 521067-06-1P, EP 001237 521067-07-2P, EP 001238 521067-08-3P, EP 001239 521067-09-4P, EP 001242 521067-10-7P, EP 001246 521067-11-8P, EP 001249 521067-13-0P, EP 001268 521067-14-1P, EP 001278 521067-15-2P, EP 001279 521067-16-3P, EP 001294 521075-56-9P, EP 001230

(preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)

IT 78-81-9, Isobutylamine 83-01-2, Diphenylcarbamoyl chloride 95-48-7, 2 Methylphenol, reactions 103-01-5 103-04-8 103-80-0, Phenylacetyl chloride 105-36-2, Ethyl bromoacetate 107-85-7, Isoamylamine 109-90-0, Ethyl isocyanate 120-23-0, 2 Naphthoxyacetic acid 122-59-8, Phenoxyacetic acid 322-26-9 541-41-3, Ethyl chloroformate 575-89-3 575-90-6 593-60-2, Vinyl bromide 610-94-6, 2 Bromobenzoic acid methyl ester 645-45-4, 3 Phenylpropionyl chloride 867-56-1 940-31-8, 2 Phenoxypropionic acid 1643-15-8 1878-49-5 5292-21-7, Cyclohexylacetic acid 13333-81-8 13335-71-2 13734-34-4 15159-40-7, 4-Morpholinecarbonyl chloride 17153-20-7, 3 Methyl 4 isoxazolecarboxylic acid 18956-87-1, 10 Phenothiazinecarbonyl chloride 19094-75-8 20312-37-2 20989-17-7, s 2 Phenylglycinol 25140-70-9 28177-48-2, 2 6 Difluorophenol 38206-97-2 38206-99-4 56613-80-0, r 2 Phenylglycinol 70267-26-4, s 2 Hydroxycaproic acid 72985-21-8 95110-10-4 104295-97-8 162922-18-1 178153-11-2 189955-91-7 207446-94-4 329003-19-2 455887-97-5 519050-75-0 519050-77-2 519050-82-9 519050-83-0 519050-84-1 519050-86-3

519050-88-5 519050-90-9 519050-92-1
(preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)

L48 ANSWER 8 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:96177 HCAPLUS Full-text
DOCUMENT NUMBER: 136:279760
TITLE: Synthesis and Rheological Behavior of Cross-Linkable Poly[N-(methacryl-2-ethyl)-N'-(3-amino(1,2,4-triazole-2-yl))urea-co-methyl methacrylate]
AUTHOR(S): Gloeckner, Patrick; Osterhold, Michael; Ritter, Helmut
CORPORATE SOURCE: Degussa AG, Marl, 45764, Germany
SOURCE: Macromolecules (2002), 35(6), 2050-2054
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 06 Feb 2002
AB A copolymer poly[N-(methacryl-2-ethyl)-N'-(3-amino(1,2,4-triazole-2- yl) urea)-co-Me methacrylate] (1) with a low .hivin.Mn value of about 1300 was prepared via free radical polymerization from the corresponding monomers N-methacrylethyl-N'-triazoyl urea (2) and Me methacrylate (3). The complex viscosity of a solution of 1 in N-Me pyrrolidone decreases with increasing temperature up to 32° at the beginning and then passes a min. at 38°. At higher temps. of about 53°, it decreases again. DSC measurements of this solution indicates phase transitions because of two endothermic signals from 32 to 44° and from 53 to 74°. Furthermore, the copolymer 1 starts to cross-link rapidly above 130°. The mechanism of this crosslinking reaction is discussed with respect to a back-formation of isocyanate intermediate that reacts with nucleophiles.
IT 61843-91-2P, (N-Benzyl-N'-ethyl)urea
(for reaction study of functional polymer; in studying thermal crosslinking of poly[N-(methacryl-2-ethyl)-N'-(3-amino(1,2,4-triazole-2-yl))urea-co-Me methacrylate])
RN 61843-91-2 HCAPLUS
CN Urea, N-ethyl-N'-(phenylmethyl)- (CA INDEX NAME)



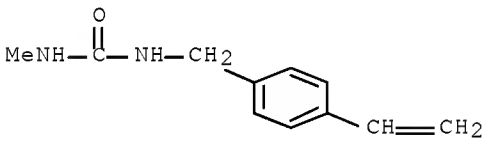
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 28, 42
IT 61843-91-2P, (N-Benzyl-N'-ethyl)urea 406205-21-8P
(for reaction study of functional polymer; in studying thermal crosslinking of poly[N-(methacryl-2-ethyl)-N'-(3-amino(1,2,4-triazole-2-yl))urea-co-Me methacrylate])
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 9 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:619333 HCAPLUS Full-text
DOCUMENT NUMBER: 134:76252
TITLE: Synthesis of a novel pH-responding polymer with

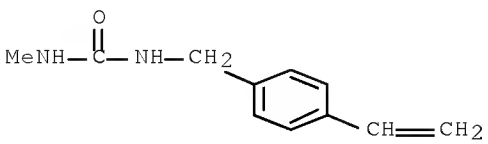
pendant barbituric acid moieties
AUTHOR(S): Zhou, W.-J.; Kurth, M. J.
CORPORATE SOURCE: Department of Chemistry, University of California, Davis, CA, 95616, USA
SOURCE: Polymer (2000), Volume Date 2001, 42(1), 345-349
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 06 Sep 2000
AB A simple method for the synthesis of pH-responding polymers containing barbituric acid moieties is described. The synthesis involves N-methyl-N'-(4-vinylbenzyl)urea preparation and its polymerization in DMF using AIBN as the initiator to give poly(N-methyl-N'-(4-vinylbenzyl)urea) with a number average mol. weight of 4.9+105 as determined by GPC. Cyclocondensation of urea with malonic acid in acetic acid/acetic anhydride affords the polymer (I) with pendant barbituric moieties. The pH-responding behavior of polymer I in water indicates that it has excellent pH-sensitivity at pH 6.apprx.7. The potential and the versatility of this work are exciting and include the potential preparation of water-soluble polymers by modification of polyureas, metal chelating materials, and "smart" hydrogels upon crosslinking.
IT 314271-93-7DP, reaction products with malonic acid, sodium salts
(preparation of a pH-responding polymer with pendant barbituric acid moieties)
RN 314271-93-7 HCAPLUS
CN Urea, N-[(4-ethenylphenyl)methyl]-N'-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 145122-21-0
CMF C11 H14 N2 O



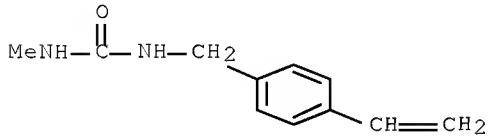
IT 145122-21-0P 314271-93-7P
(preparation of a pH-responding polymer with pendant barbituric acid moieties)
RN 145122-21-0 HCAPLUS
CN Urea, N-[(4-ethenylphenyl)methyl]-N'-methyl- (CA INDEX NAME)



RN 314271-93-7 HCAPLUS
CN Urea, N-[(4-ethenylphenyl)methyl]-N'-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 145122-21-0
CMF C11 H14 N2 O

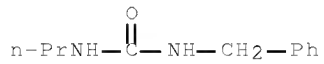


CC 63-5 (Pharmaceuticals)
Section cross-reference(s): 35
IT 141-82-2DP, Malonic acid, reaction products with poly(N-Methyl-N'-(4-vinylbenzyl)urea), sodium salts
314271-93-7DP, reaction products with malonic acid, sodium salts
(preparation of a pH-responding polymer with pendant barbituric acid moieties)
IT 145122-21-0P 314271-92-6P 314271-93-7P
(preparation of a pH-responding polymer with pendant barbituric acid moieties)
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 10 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:682251 HCAPLUS Full-text
DOCUMENT NUMBER: 127:332455
ORIGINAL REFERENCE NO.: 127:65289a,65292a
TITLE: Functionalized resin and its use in chemical synthesis
INVENTOR(S): Estep, Kimberly Gail; Roskamp, Eric J.
PATENT ASSIGNEE(S): Pfizer Inc., USA
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 801083 | A2 | 19971015 | EP 1997-302276 <-- | 19970403 |
| EP 801083 | A3 | 19991229 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI | | | | |
| CA 2201804 | A1 | 19971008 | CA 1997-2201804 <-- | 19970404 |

JP 10067724 A 19980310 JP 1997-88321 19970407
<--
PRIORITY APPLN. INFO.: US 1996-15206P P 19960408
<--
OTHER SOURCE(S): MARPAT 127:332455
ED Entered STN: 27 Oct 1997
AB A functional resin containing indole-3-carboxaldehyde or pyrrole-2-carboxaldehyde groups is useful to facilitate automated synthesis of amides or related compds. for biol. screening. Alkylation of indole-3-carboxaldehyde with BrCH2CO2Et, saponification, and condensation with aminomethylated polystyrene in the presence of diisopropylcarbodiimide gave a functionalized resin. Synthesis of 3,4,5-(MeO)3C6H2CH2NHAc was accomplished by (1) condensation of the resin-supported aldehyde with 3,4,5-(MeO)3C6H2CH2NH2 at room temperature under reducing conditions [Me4N+ -BH(OAc)3], (2) acylation of the resulting secondary amine with Ac2O, and (3) cleavage of the desired product in 93% yield by treatment with CF3CO2H in CH2Cl2 at room temperature
IT 197727-61-0P
(use of functionalized resins in amide synthesis)
RN 197727-61-0 HCAPLUS
CN Urea, N-(phenylmethyl)-N'-propyl- (CA INDEX NAME)

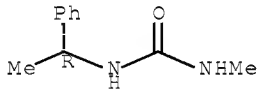


IC ICM C08F008-30
ICS C07K001-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 9, 21
IT 80-39-7P, N-Ethyl-4-methylbenzenesulfonamide 588-46-5P, N-Benzylacetamide 1576-37-0P 10264-14-9P, N-Benzylbutyramide 13434-12-3P, N-(3-Methylbutyl)acetamide 16339-54-1P 17665-85-9P, N-(3,3-Diphenylpropyl)acetamide 21403-24-7P 23974-15-4P, N-(4-Pyridylmethyl)acetamide 26011-73-4P, N-(2-p-Tolylethyl)acetamide 35103-34-5P, N-(4-Methoxybenzyl)acetamide 35665-26-0P, N-Benzylcyclohexanecarboxamide 46234-16-6P, N-(4-Methoxybenzyl)guanidine 53313-32-9P, N-(3,4-Dichlorobenzyl)acetamide 57058-33-0P, N-(4-Chlorobenzyl)acetamide 57760-14-2P, N-Acetyl-d-amphetamine 67319-74-8P, N-[3-(1-Imidazolyl)propyl]acetamide 93007-74-0P, N-(2,2-Diphenylethyl)acetamide 101724-54-3P, N-(2-Morpholinoethyl)acetamide 106692-36-8P 119059-70-0P 150871-44-6P, N-[2-(2-Methoxyphenyl)ethyl]acetamide 178312-60-2P 197727-55-2P, N-(3,4,5-Trimethoxybenzyl)acetamide 197727-56-3P, N-(3-Isopropoxypropyl)acetamide 197727-58-5P 197727-59-6P 197727-60-9P 197727-61-0P 197727-62-1P 197727-63-2P 197727-64-3P 197727-65-4P 197727-97-2P 197812-05-8P, N-(Adamantylmethyl)acetamide
(use of functionalized resins in amide synthesis)

L48 ANSWER 11 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:314951 HCAPLUS Full-text
DOCUMENT NUMBER: 127:5420
ORIGINAL REFERENCE NO.: 127:1227a,1230a
TITLE: Living Polymerization of Carbodiimides Initiated by Copper(I) and Copper(II) Amidinate Complexes

AUTHOR(S): Shibayama, Koichi; Seidel, Scott W.; Novak, Bruce M.
CORPORATE SOURCE: Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA, 01003, USA
SOURCE: Macromolecules (1997), 30(11), 3159-3163
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 16 May 1997
AB Robust catalysts based on copper(I) and copper(II) amidinate complexes initiate living polymerization of carbodiimide. The tolerance of these complexes to impurities is illustrated by the fact that they cleanly initiate the polymerization of carbodiimides under air and oxygen. They are even active in the presence of water, but both mol. wts. and yields tend to be lower than in dry solvents. The catalytic activity of a copper(II) amidinato complex is almost equal that of reported titanium(IV) initiators. Both oxidation states are active, but Cu(II) complexes are more active in terms of rates of reaction. Regardless of the oxidation state of the initial complex, all polymns. run in the presence of oxygen proceed through the Cu(II) oxidation state. Mechanistic studies indicate that the carbodiimides insert into one of the copper-amidinate bonds, thus becoming the end group of the growing polymer chain. The resultant polycarbodiimides from bulk polymns. were isolated, after dissolving to toluene, by precipitation into excess methanol, and lyophilization from benzene, as a spongy white solid. Anal. of these systems by gel permeation chromatog.-light scattering measurements (GPC-LS) and preliminary kinetic anal. suggest this system to be living. Polycarbodiimides adopt extended-chain, helical conformations; data from X-ray scattering studies and mol. modeling indicate that polycarbodiimides display a 6/1 helix in the solid state, and viscometry and light scattering data indicate that this extended-chain conformation persists in solution
IT 190389-88-9P
(kinetics and mechanism of living polymerization of carbodiimides initiated by copper(I) and copper(II) amidinate catalysts)
RN 190389-88-9 HCAPLUS
CN Urea, N-methyl-N'-[(1R)-1-phenylethyl]- (CA INDEX NAME)

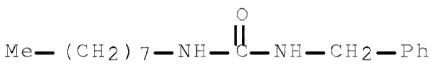
Absolute stereochemistry. Rotation (+).




CC 35-3 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 29, 67
IT 2763-88-4P, N,N'-Dihexylurea 190389-88-9P
(kinetics and mechanism of living polymerization of carbodiimides initiated by copper(I) and copper(II) amidinate catalysts)
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 12 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:43023 HCAPLUS Full-text
DOCUMENT NUMBER: 126:191368
ORIGINAL REFERENCE NO.: 126:36863a,36866a

TITLE: Di-urea compounds as gelators for organic solvents
AUTHOR(S): van Esch, Jan; Kellogg, Richard M.; Feringa, Ben L.
CORPORATE SOURCE: Groningen Cent. Catal. Synth., Univ. Groningen, Groningen, 9747 AG, Neth.
SOURCE: Tetrahedron Letters (1997), 38(2), 281-284
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 20 Jan 1997
AB Simple diurea compds. form thermoreversible gels with several organic solvents. These gels are stable up to temps. of 100°, and can be stored for months. Electron microscopy reveals that in these solvents the gelation agents assemble into very thin rectangular sheets which are several tens of micrometers long.
IT 187584-83-4P, N-Benzyl-N'-octylurea
(diurea gelators for organic solvents and electron microscopy study of thermoreversible gels)
RN 187584-83-4 HCAPLUS
CN Urea, N-octyl-N'-(phenylmethyl)- (CA INDEX NAME)



CC 66-4 (Surface Chemistry and Colloids)
Section cross-reference(s): 23, 36
IT 538-32-9DP, N-Benzylurea, derivs. 98672-63-0P, N-Benzyl-N'-(α-methylbenzyl)urea 187584-83-4P, N-Benzyl-N'-octylurea 187584-84-5P, 1,3-Propanediylbis(N-benzylurea) 187584-85-6P, 1,9-Nonanediylbis(N-benzylurea) 187584-86-7P, 1,12-Dodecanediylbis(N-benzylurea)
(diurea gelators for organic solvents and electron microscopy study of thermoreversible gels)
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 13 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:17518 HCAPLUS Full-text
DOCUMENT NUMBER: 126:118270
ORIGINAL REFERENCE NO.: 126:22841a
TITLE: Cationic copolymerization of styrenes with an isocyanate-bearing homolog
AUTHOR(S): Trejo-O'Reilly, Jose Antonio; Cavaille, Jean Yves; Gandini, Alessandro
CORPORATE SOURCE: CERMAV-CNRS (UJF), BP 53, F-38041, Grenoble, 9, Fr.
SOURCE: Reactive & Functional Polymers (1997), 32(1), 9-19
CODEN: RFPOF6; ISSN: 1381-5148
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 11 Jan 1997

AB The cationic homopolymn. of the isocyanate monomer 3-isopropenyl-α,α-dimethylbenzyl isocyanate (I) as well as its copolymn. with styrene and α-methylstyrene were studied. The syntheses involved the use of titanium tetrachloride in methylene chloride at low temperature Apart from showing that it is possible to homopolymerize I, copolymers with less than 30 mol% of I were prepared and thoroughly characterized. They had a very wide mol. weight distribution (Ip.apprx.4) and their Tg's followed Fox's equation. These highly reactive copolymers were synthesized in view of coupling them with cellulosic fibers.

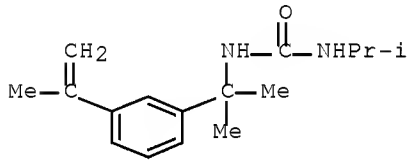
IT 186180-33-6P
(cationic preparation and characterization of)

RN 186180-33-6 HCAPLUS

CN Urea, N-(1-methylethyl)-N'-[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

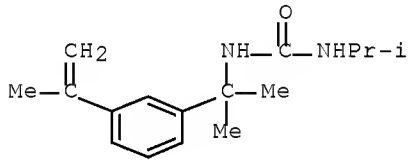
CRN 186180-32-5
CMF C16 H24 N2 O



IT 186180-32-5P
(preparation and polymerization of)

RN 186180-32-5 HCAPLUS

CN Urea, N-(1-methylethyl)-N'-[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]- (CA INDEX NAME)



CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37, 40

IT 186180-33-6P
(cationic preparation and characterization of)

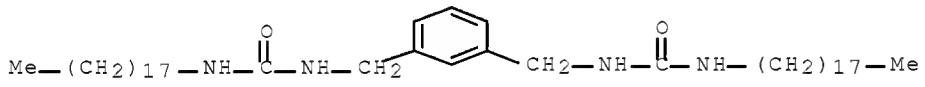
IT 186180-32-5P
(preparation and polymerization of)

L48 ANSWER 14 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:579734 HCAPLUS Full-text
DOCUMENT NUMBER: 125:198313
ORIGINAL REFERENCE NO.: 125:37101a,37104a

TITLE: Rubber compositions and automobile stabilizer bushes molded thereof
INVENTOR(S): Utsugi, Hiroyuki; Nomura, Satoshi; Fujii, Noriki
PATENT ASSIGNEE(S): Kinugawa Rubber Ind, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 08169984 | A | 19960702 | JP 1994-314379 | 19941219 |
| | | | <-- | |
| PRIORITY APPLN. INFO.: | | | JP 1994-314379 | 19941219 |
| | | | <-- | |

ED Entered STN: 28 Sep 1996
AB The compns. with low friction noise contain 10-30 phr R1NHCONHR2(NHCONHR3)n (I; R1-3 = alkyl, aryl; n = 0, 1). Thus, a stabilizer bush prepared by vulcanizing a composition of natural rubber 70, butadiene rubber 30, ZnO 5, stearic acid 1, an antioxidant 5, I (R1, R2 = C18H37; n = 0) 30, carbon black 70, a vulcanizing accelerator 1.5, and S 3.0 parts showed low squeeze friction, no friction noise, and high hardness at 80°.
IT 104241-95-4
(urea derivative-containing rubbers for automobile stabilizer bushes with reduced noise and high hardness at high temperature)
RN 104241-95-4 HCAPLUS
CN Urea, N,N''-[1,3-phenylenebis(methylene)]bis[N'-octadecyl- (9CI) (CA INDEX NAME)



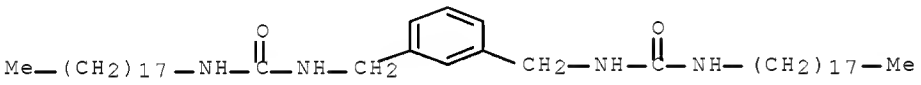
IC ICM C08L021-00
ICS C08J005-10
CC 39-15 (Synthetic Elastomers and Natural Rubber)
IT 4051-66-5 4128-43-2 91835-71-1 103522-96-9 104241-95-4
(urea derivative-containing rubbers for automobile stabilizer bushes with reduced noise and high hardness at high temperature)

L48 ANSWER 15 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:650439 HCAPLUS Full-text
DOCUMENT NUMBER: 123:171481
ORIGINAL REFERENCE NO.: 123:30613a,30616a
TITLE: Polyamides containing amides with good mold release property
INVENTOR(S): Karasawa, Hiroo; Umetsu, Hideyuki; Iwamoto, Masaaki
PATENT ASSIGNEE(S): Toray Industries, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 07082475 | A | 19950328 | JP 1993-225628 <-- | 19930910 |
| JP 3407349 | B2 | 20030519 | | |
| PRIORITY APPLN. INFO.: | | | JP 1993-225628 <-- | 19930910 |

OTHER SOURCE(S): MARPAT 123:171481
ED Entered STN: 01 Jul 1995
AB The compns. having improved mech. properties contain 100 parts polyamides and 0.005-10 parts R1CONH(R3NHCOR4CONH)nR3NHCOR2 (R1, R2 = C5-35 hydrocarbyl substituted by ≥1 OH group; R3, R4 = C1-12 hydrocarbylene; n = 0-5). Thus, 100 parts nylon 6 and 0.01 part C6H13CH(OH)C10H20CONH(CH2)2NHCOC10H20CH(OH)C6H13 were dry-blended and injection-molded to give moldings with good mold release property.
IT 104241-95-4
(additives; polyamides containing amides with good mold release property and mech. properties)
RN 104241-95-4 HCAPLUS
CN Urea, N,N''-[1,3-phenylenebis(methylene)]bis[N'-octadecyl- (9CI) (CA INDEX NAME)



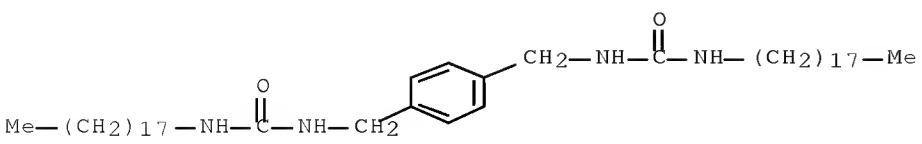
IC ICM C08L077-00
ICS C08K003-26; C08K003-34; C08K005-10; C08K005-20
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
ST polyamide amide mold release agent; nylon molding release agent
IT Kaolin, uses
Mica-group minerals, uses
(additives; polyamides containing amides with good mold release property and mech. properties)
IT Parting materials
(polyamides containing amides with good mold release property and mech. properties)
IT Amides, uses
(polyamides containing amides with good mold release property and mech. properties)
IT Polyamides, uses
(polyamides containing amides with good mold release property and mech. properties)
IT 471-34-1, Calcium carbonate, uses 637-12-7 6865-35-6 14807-96-6, Talc, uses 60768-10-7 65792-46-3 74388-22-0 104241-95-4
(additives; polyamides containing amides with good mold release property and mech. properties)
IT 123-26-2 55349-01-4 128554-52-9 167308-45-4 167308-46-5
(polyamides containing amides with good mold release property and mech. properties)
IT 9008-66-6, Nylon 610 9011-52-3, Hexamethylenediamine-sebacic acid

copolymer 25038-54-4, Nylon 6, uses 25776-72-1, Nylon 6T66 32131-17-2, Nylon 66, uses
(polyamides containing amides with good mold release property and mech. properties)

L48 ANSWER 16 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1995:480214 HCAPLUS Full-text
DOCUMENT NUMBER: 122:241421
ORIGINAL REFERENCE NO.: 122:44127a,44130a
TITLE: Thermoplastic compositions with good moldability and resistance to heat and impact
INVENTOR(S): Nishihara, Hajime; Maeda, Katsuaki
PATENT ASSIGNEE(S): Asahi Chemical Ind, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 06220332 | A | 19940809 | JP 1993-13227 <-- | 19930129 |
| PRIORITY APPLN. INFO.: | | | JP 1993-13227 <-- | 19930129 |

ED Entered STN: 12 Apr 1995
AB The title compns. comprise (A) thermoplastic resins, (B) compds. containing hydroxyaryl phosphate ester groups, and (C) higher fatty acids or their esters and amides, higher aliphatic alcs., metal soaps and aliphatic hydrocarbons as processing aids provided that the absolute differences ΔS1, ΔS2 and ΔS3 in solubility parameters (SP values; [cal/cm3]0.5) of A and B, B and C and C and A are $1.0 \leq \Delta S1 \leq 2.0$, $0 \leq \Delta S2 \leq 2.5$, and $0.5 \leq \Delta S3 \leq 4.5$, resp. A molding composition comprised (A) 100 parts a 71:29 mixture of high-impact polystyrene and a polyoxyphenylene-polystyrene 70/30 blend, (B) 12 parts a 54.2/18.3/27.5 mixture of di-Ph resorcinyl phosphate (I), Ph3PO4 (II) and Z(OPO3Ph)2 (Z = 1,3-phenylene) (III), and (C) 2.4 parts ethylenebis(12-hydroxy)stearamide (IV) where the SP values of A component, I, II, III, and IV were 10.0, 11.8, 10.7, 10.8 and 10.9, resp.
IT 65792-44-1, Hackreen SX
(thermoplastic compns. with good moldability and resistance to heat and impact)
RN 65792-44-1 HCAPLUS
CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



IC ICM C08L101-00

ICS C08K005-01; C08K005-05; C08K005-09; C08K005-10; C08K005-20; C08K005-521
CC 37-6 (Plastics Manufacture and Processing)
ST polyoxyphenylene polystyrene blend moldability; impact resistance thermoplastic blend molding; heat resistance thermoplastic blend molding; phosphate ester stabilizer thermoplastic molding compn; ethylenebishydroxystearamide processing aid thermoplastic molding; metal soap processing aid molding; alc higher processing aid molding; aliph fatty acid processing aid
IT Alcohols, uses
Amides, uses
Esters, uses
Fatty acids, uses
Paraffin oils
Soaps
(thermoplastic compns. with good moldability and resistance to heat and impact)
IT Plastics, molded
Polyoxyphenylenes
(thermoplastic compns. with good moldability and resistance to heat and impact)
IT 16099-54-0, p-Phenylenebisstearamide
(Alflow AD-618; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 109-23-9, Methylenebisstearamide
(Bisamid LA; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 22214-23-9
(Hackreen SH; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 162293-96-1, Diphenylmethanebisstearylurea
(Hackreen SM; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 91835-71-1
(Hackreen ST; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 9016-45-9, Polyethylene glycol monononylphenyl ether
(Nonion NS-270; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 17832-30-3, Ethylenebiscaprylamide
(Slipacks C; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 25151-31-9, N,N'-Distearyladipamide
(Slipacks ZSA; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 149696-77-5
(Unister 176K; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 17671-27-1, Behenyl behenate
(Unister M-2222SL; thermoplastic compns. with good moldability and resistance to heat and impact)
IT 57-11-4, Octadecanoic acid, uses 69-65-8, Mannitol 80-05-7, uses 80-05-7D, esters with methylphenols and phosphoric acid, oligomers 108-46-3D, 1,3-Benzenediol, phosphate esters, oligomers 108-95-2D, Phenol, phosphate esters, oligomers 110-31-6, Alflow AD 281 115-83-3, Unister H-476 115-86-6, Triphenyl phosphate 123-26-2D, Slipacks H, esters with bisphenol A and phosphoric acid, oligomers 1319-77-3D, Cresol, esters with bisphenol A and phosphoric acid, oligomers 7003-56-7, Slipacks L 7664-38-2D, Phosphoric acid,

esters with phenols and resorcinol, oligomers 9005-08-7, Nissan Nonion DS-60HN 32492-61-8, Uniol DA-350F 51018-99-6D, Novacid P, esters with bisphenol A and phosphoric acid, oligomers 57583-54-7, Resorcinol bis(diphenyl phosphate) 65792-44-1, Hackreen SX 93981-32-9, CR741C 105937-68-6 125437-37-8 130293-42-4, Unigly GS-106
(thermoplastic compns. with good moldability and resistance to heat and impact)

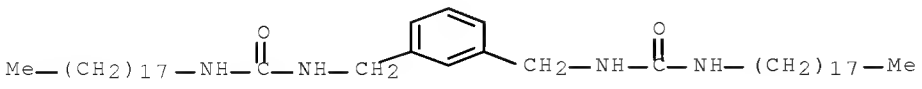
IT 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9003-56-9, Stylac 120B 24938-67-8, 2,6-Xylenol polymer, sru 25134-01-4, 2,6-Xylenol polymer 143289-85-4, Butadiene-α-methylstyrene dimer-styrene graft copolymer
(thermoplastic compns. with good moldability and resistance to heat and impact)

L48 ANSWER 17 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1994:535559 HCAPLUS Full-text
DOCUMENT NUMBER: 121:135559
ORIGINAL REFERENCE NO.: 121:24521a,24524a
TITLE: Polyamide compositions containing bisureas for moldings
INVENTOR(S): Nishimura, Tooru; Karasawa, Hiroo; Iwamoto, Masaaki
PATENT ASSIGNEE(S): Toray Industries, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 05320501 | A | 19931203 | JP 1992-124854 <-- | 19920518 |

PRIORITY APPLN. INFO.: JP 1992-124854 <-- 19920518

ED Entered STN: 17 Sep 1994
AB Polyamides containing 0.001-10% bisurea R2NHCONHR1NHCONHR3 (R1 = divalent hydrocarbyl; R2-3 = C9-40 aliphatic hydrocarbyl) and 0.005-5% Ba stearate (I) have good melt flow and mold release properties and give moldings with good appearance, stiffness, and strength. Nylon 6 containing 0.3% [Me(CH2)17NHCONH-p-C6H4]2CH2 and 0.4% I gave injection moldings showing tensile strength 920 kg/cm2, elongation 200%, flexural modulus 31,000 kg/cm2, and good dimensional stability.
IT 104241-95-4
(polyamides containing, for injection molding with short cycle time)
RN 104241-95-4 HCAPLUS
CN Urea, N,N''-[1,3-phenylenebis(methylene)]bis[N'-octadecyl- (9CI) (CA INDEX NAME)

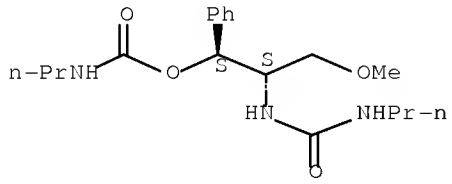


IC ICM C08L077-00
ICS C08K005-09; C08K005-21
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
ST polyamide urea deriv injection molding; mold release polyamide urea deriv; bisurea compd polyamide injection molding; barium stearate polyamide injection molding ; soap barium polyamide injection molding; polycaprolactam urea deriv injection molding
IT Polyamides, uses
(injection molding of, containing urea derivative and barium stearate, with short cycle time)
IT Soaps
(barium, polyamides containing, for injection molding with short cycle time)
IT Molding apparatus for plastics and rubbers
(injection, release agents for, for polyamides)
IT 25038-54-4, Nylon 6, uses 32131-17-2, Nylon 66, uses
(injection molding of, containing urea derivative and barium stearate, with short cycle time)
IT 6865-35-6, Barium stearate 22214-23-9 43136-14-7 103522-96-9 104241-95-4 157189-33-8
(polyamides containing, for injection molding with short cycle time)

L48 ANSWER 18 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1993:517957 HCAPLUS Full-text
DOCUMENT NUMBER: 119:117957
ORIGINAL REFERENCE NO.: 119:21249a,21252a
TITLE: Synthesis, characterization, and chiroptical property of optically active poly(urea urethanes)
AUTHOR(S): Chen, Yun; Tseng, Hsien Hsiung
CORPORATE SOURCE: Dep. Chem. Eng., Natl. Cheng Kung Univ., Tainan, 70101, Taiwan
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1993), 31(7), 1719-27
CODEN: JPACEC; ISSN: 0887-624X
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 18 Sep 1993
AB Five new optically active poly(urea-urethanes) were synthesized by solution polyaddn. of (1S,2S)-(+)-2-amino-3-methoxy-1-phenyl-1-propanol (I) with diisocyanates (MDI, 2,4-TDI, HMDI, IPDI, m-xylylene diisocyanate) at 80° for 60 h. In some cases, the reaction mixture transformed into a gel when cooled to room temperature The reduced viscosities were 0.14-0.63 dL/g depending on the solvents and diisocyanates. Thermal behavior of these polymers was studied by DSC and TGA. The glass and crystallization temps. were in the range of 80-200 and 220-238°, resp. Thermal decomposition started at .apprx.275° and the residual wts. at 400° were 15-60% depending on the polymers. The conformation of the polymers in film state was studied by CD spectra, by comparison with the corresponding model compds. which were synthesized from I and PhNCO or PrNCO. Polymers derived from aromatic diisocyanates formed an ordered conformation in the film state, while those from aliphatic diisocyanates did not. After packing as chiral stationary phases for HPLC, the polymers showed selective resolution to trans-stilbene oxide and trans-1,2-cyclopentanedicarboxanilide.
IT 149474-87-3P
(preparation of, as model compound for chiral polyurethane-polyureas)
RN 149474-87-3 HCAPLUS

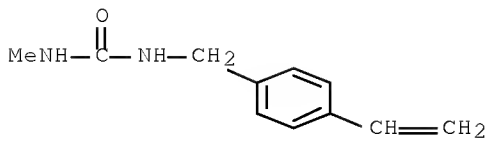
CN Carbamic acid, propyl-, 3-methoxy-1-phenyl-2-[[(propylamino)carbonyl]amino]propyl ester, [S-(R*,R*)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.




CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36
IT 149474-86-2P 149474-87-3P
(preparation of, as model compound for chiral polyurethane-polyureas)

L48 ANSWER 19 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1993:101503 HCAPLUS Full-text
DOCUMENT NUMBER: 118:101503
ORIGINAL REFERENCE NO.: 118:17765a,17768a
TITLE: Solid-solid-liquid phase transfer reactions catalyzed by polymer-supported ureas
AUTHOR(S): Kondo, Shuji; Okamura, Takeshiro; Takesue, Masakazu; Kunisada, Hideo; Yuki, Yasuo
CORPORATE SOURCE: Dep. Mater. Sci. Eng., Nagoya Inst. Technol., Nagoya, 466, Japan
SOURCE: Makromolekulare Chemie (1992), 193(9), 2265-71
CODEN: MACEAK; ISSN: 0025-116X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 118:101503
ED Entered STN: 19 Mar 1993
AB Polymer-supported ureas were prepared by copolymn. of the corresponding vinyl monomers p-CH2:CHC6H4CH2NRCONR1Me (R = H, R1 = H, Me; R = R1 = Me) and divinylbenzene with 2,2'-azoisobutyronitrile. These polymers show catalytic activity in the reaction of 1-bromooctane with solid KSCN, although the corresponding monomeric ureas are inactive. The catalytic activity is enhanced remarkably by replacing the amino hydrogen for a Me group. Further, the catalytic activity is affected by some exptl. parameters such as stirring, particle size of the catalyst, degree of crosslinking, and solvent. A plausible catalytic reaction mechanism is proposed which consists of collisional contact between the solid catalyst and the reagent.
IT 145122-21-0P
(preparation and copolymn. of, with divinylbenzene)
RN 145122-21-0 HCAPLUS
CN Urea, N-[(4-ethenylphenyl)methyl]-N'-methyl- (CA INDEX NAME)

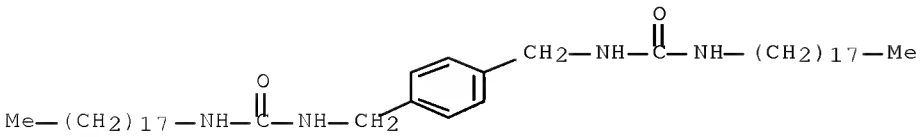


CC 23-20 (Aliphatic Compounds)
Section cross-reference(s): 35
IT 117242-49-6P 145122-21-0P 145122-22-1P
(preparation and copolymn. of, with divinylbenzene)

L48 ANSWER 20 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1983:55058 HCAPLUS Full-text
DOCUMENT NUMBER: 98:55058
ORIGINAL REFERENCE NO.: 98:8491a,8494a
TITLE: Poly(tetramethylene terephthalate) compositions
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 57100157 | A | 19820622 | JP 1980-177710 <-- | 19801216 |
| PRIORITY APPLN. INFO.: | | | JP 1980-177710 <-- | 19801216 |

ED Entered STN: 12 May 1984
AB Fire-resistant poly(tetramethylene terephthalate) (I) compns. with good mech. properties. contain 1-10 phr NH4 polyphosphate and 0.01-1 phr RNHCONHZNHCONHR1 (Z = an aromatic hydrocarbn residue; R, R1 = a C8-32 aliphatic hydrocarbon group). Thus, an injection-molded specimen prepared from a composition containing I 100, NH4 polyphosphate 3.5, and 1,4-bis(3-octadecylaminomethyl)benzene (II) [65792-44-1] 0.3 part had fire resistance rating (UL 94) V-2, tensile strength 560 kg/cm2, elongation 30%, Izod impact strength 3.4 kg-cm/cm, and NH4 polyphosphate lumping (counted for 0.5-1 mm-diameter particles) none, compared with V-2, 560 kg/cm2, 10%, 2.8 kg-cm/cm, and 1.3/10 cm2, resp., for a control prepared from a composition not containing II.
IT 65792-44-1
(dispersants, for ammonium polyphosphate fireproofing agents, in polyesters)
RN 65792-44-1 HCAPLUS
CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



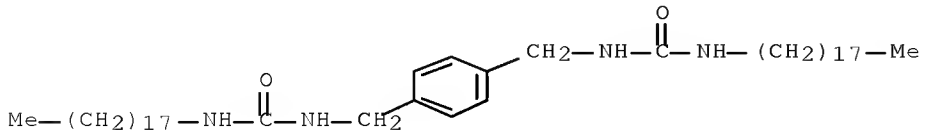
IC C08L067-02; C08K005-20; C08K005-51
CC 37-6 (Plastics Manufacture and Processing)
IT 65792-44-1
(dispersants, for ammonium polyphosphate fireproofing agents, in polyesters)

L48 ANSWER 21 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1981:463307 HCAPLUS Full-text
DOCUMENT NUMBER: 95:63307
ORIGINAL REFERENCE NO.: 95:10701a,10704a
TITLE: Polyamide resin composition
INVENTOR(S): Ohmura, Zasuhiro; Maruyama, Seiichiro; Kawasaki, Hiroyuku
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd. , Japan
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 29566 | A1 | 19810603 | EP 1980-107120 <-- | 19801117 |
| EP 29566 | B1 | 19840418 | | |
| R: CH, DE, FR, GB, IT | | | | |
| JP 56074145 | A | 19810619 | JP 1979-151077 <-- | 19791121 |
| JP 63002983 | B | 19880121 | | |
| US 4339555 | A | 19820713 | US 1980-200579 <-- | 19801024 |
| PRIORITY APPLN. INFO.: | | | JP 1979-151077 A <-- | 19791121 |

ED Entered STN: 12 May 1984
AB A composition having good impact resistance and mold release properties comprises a polyamide containing urea derivative RNHCONHR1NHCONHR2 (R1 = a divalent aromatic hydrocarbon group; R1, R2 = C8-32 alkyl) and a graft copolymer of an ethylene-α-olefin copolymer and an unsatd. carboxylic acid. Thus, 80 parts nylon 6 [25038-54-4] and 20 parts 1-butene-ethylene-maleic anhydride graft copolymer [63625-36-5] were melt blended at 250° at 30 mm in an extruder and pelletized. To 100 parts of the pellets was added 0.15 part 1,4-bis(3-octadecylureidomethyl)benzene (I) [65792-44-1]. When the composition was injection molded, 30 shots were made before release failure compared with 4 shots for the composition containing no I; impact resistance was 57 kg-cm/cm compared with 40 kg-cm/cm for the composition containing no I.
IT 65792-44-1
(polyamide-ethylene copolymer compns. containing, impact-resistant and mold releasing)
RN 65792-44-1 HCAPLUS

CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



IC C08L077-00; C08L051-06; C08K005-21
CC 36-6 (Plastics Manufacture and Processing)
ST polyamide mold release impact; nylon polyolefin mold release; ureidobenzene nylon mold release; urea deriv mold release agent
IT Kaolin, uses and miscellaneous
(nucleating agent, for impact-resistant polyamide-ethylene copolymer moldings)
IT 32131-17-2, uses and miscellaneous
(ethylene copolymer blend, containing urea derivative, impact-resistant and mold-releasable)
IT 65792-44-1
(polyamide-ethylene copolymer compns. containing, impact-resistant and mold releasing)

L48 ANSWER 22 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1981:140664 HCAPLUS Full-text
DOCUMENT NUMBER: 94:140664
ORIGINAL REFERENCE NO.: 94:23047a,23050a
TITLE: Aromatic polyester-polycarbonate resin compositions
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 55131047 | A | 19801011 | JP 1979-39544 <-- | 19790402 |
| PRIORITY APPLN. INFO.: | | | JP 1979-39544 <-- | A 19790402 |

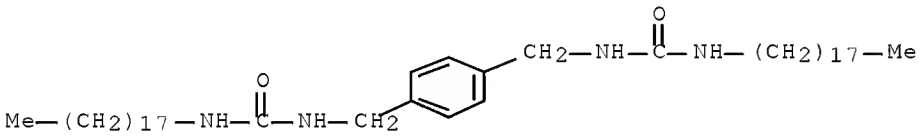
ED Entered STN: 12 May 1984
AB An aromatic polyester-polycarbonate (I) which has intrinsic viscosity (CH2Cl2, 20°) 0.3-1.5, Tg 160-90°, and CO2H end groups ≤10 μequiv/g resin comprises p-HOC6H4ZC6H4OH-p (Z = divalent group, rings may be substituted) residues, terephthalic acid residues, and carbonate linkages at molar ratios of 1:0.33-0.75:0.67-0.25 and contains 0.01-5 parts (per 100 parts I) urea compound RNHCONHZ1NHCONHR1 (Z1 = aromatic hydrocarbon residue; R, R1 = C8-32 aliphatic hydrocarbon residue). Thus, a 3% CH2Cl2 solution of terephthaloyl chloride, a 13% aqueous solution of bisphenol A Na salt (II), and 2% aqueous Et3N were passed through a tubular glass reactor with COCl2 introduced at the midpoint

to give a chloroformate-terminated oligomer. A CH2Cl2 solution of the oligomer, II, 25% NaOH solution, 2% Et3N solution, and p-tert-butylphenol were stirred at room temperature for 2h. The product (III) [74575-75-0] had intrinsic viscosity 0.49 and bisphenol A residue-terephthalic acid residue-carbonate linkage molar ratio 1:0.48:0.52. To 100 parts III 0.1 part 1,4-bis[(3-octadecylureido)methyl]benzene (IV) [ 65792-44-1] was added, and the mixture was pelletized and injection molded at 340° (mold temperature 137°). The product showed mold releasability (number of shots until ejector marks are apparent) 30 shots, injection pressure 920 kg/cm2, tensile and flexural strength (ASTM D 638-68 and 790, resp.) 710 and 870 kg/cm2, Izod impact strength (ASTM D 256) 42 kg-cm/cm, and deformation temperature 160°. III without IV showed lower mold releasability (7 shots) and required higher pressure for molding (1050 kg/cm2).

IT 65792-44-1
(mold release agent and lubricant, for aromatic polyester polycarbonate)

RN 65792-44-1 HCAPLUS

CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



IC C08L069-00; C08K005-21; C08L067-02

CC 36-6 (Plastics Manufacture and Processing)

ST arom polyester polycarbonate molding compn; xylylenebisurea mold release agent lubricant; urea xylylenebis lubricant plastic molding

IT Molding of plastics and rubbers
(of aromatic polyester-polycarbonates, xylylenebis(octadecylurea) for improved processability in)

IT Lubricants
(xylylenebis(octadecylurea), for aromatic polyester-polycarbonate molding compns.)

IT Polyesters, uses and miscellaneous
(polycarbonate-, molding of, xylylenebis(octadecylurea) for improved processability in)

IT Polycarbonates
(polyester-, molding of, xylylenebis(octadecylurea) for improved processability in)

IT 65792-44-1
(mold release agent and lubricant, for aromatic polyester polycarbonate)

IT 74575-75-0
(molding of, xylylenebis(octadecylurea) for improved processability in)

L48 ANSWER 23 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1980:472227 HCAPLUS Full-text

DOCUMENT NUMBER: 93:72227

ORIGINAL REFERENCE NO.: 93:11769a,11772a

TITLE: Enantiomer selection in the reaction of

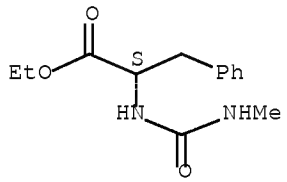
N-methyl-α-amino acid N-carboxyanhydride and 3-methyl-5-substituted hydantoin: a model reaction for the stereoselective polymerization of α-amino acid N-carboxyanhydride

AUTHOR(S): Hashimoto, Yutaka; Imanishi, Yukio
CORPORATE SOURCE: Dep. Polym. Chem., Kyoto Univ., Kyoto, Japan
SOURCE: Biopolymers (1980), 19(3), 655-68
CODEN: BIPMAA; ISSN: 0006-3525
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 12 May 1984
AB An anal. of the enantioselective tertiary amine-catalyzed addition reaction of title hydantoin (HDT) derivs. to the title N-carboxyanhydride (NCA) derivs. of L-alanine or L-phenylalanine showed that the enantiomer selection by terminal-unit control took place in the propagation reaction according to the activated NCA mechanism. Several activated HDT derivs. with the S-configuration reacted more rapidly than their activated enantiomers. In the title polymerization, the chirality of the penultimate unit as well as that of the terminal NCA ring play an important part in determining the enantiomer selection.

IT 74280-63-0P 74280-64-1P 74280-65-2P
(preparation and cyclization of)

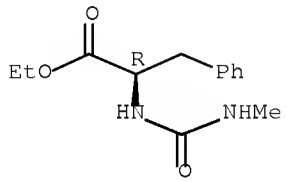
RN 74280-63-0 HCAPLUS
CN L-Phenylalanine, N-[(methylamino)carbonyl]-, ethyl ester (CA INDEX NAME)

Absolute stereochemistry.

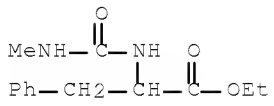



RN 74280-64-1 HCAPLUS
CN D-Phenylalanine, N-[(methylamino)carbonyl]-, ethyl ester (CA INDEX NAME)

Absolute stereochemistry.




RN 74280-65-2 HCAPLUS
CN Phenylalanine, N-[(methylamino)carbonyl]-, ethyl ester (CA INDEX NAME)



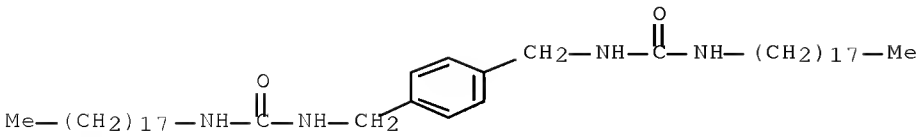
CC 34-2 (Synthesis of Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22, 28, 35
IT 74280-60-7P 74280-61-8P 74280-62-9P 74280-63-0P
74280-64-1P 74280-65-2P 74280-66-3P 74280-67-4P
74280-68-5P 74280-69-6P 74280-70-9P
(preparation and cyclization of)

L48 ANSWER 24 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1979:72921 HCAPLUS Full-text
DOCUMENT NUMBER: 90:72921
ORIGINAL REFERENCE NO.: 90:11553a,11556a
TITLE: Polyamide chips for injection molding
INVENTOR(S): Omura, Yasuhiro; Miyoshi, Katsunori; Koga, Tokumichi
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 53126056 | A | 19781102 | JP 1977-41086 <-- | 19770411 |
| JP 55021063 | B | 19800606 | | |

PRIORITY APPLN. INFO.: JP 1977-41086 A 19770411 <--

ED Entered STN: 12 May 1984
AB Polyamide chips are treated with 0.005-1 weight% tackifiers such as polyalkylene glycol esters and 0.005-5 weight % bisureido compds. to improve the injection moldability of the chips. Thus, 100 parts nylon 6 [25038-54-4] chips and 0.03 part Nonion L 4 [9004-81-3] were stirred, treated with 0.1 part 1,4-bis(3-octadecylureidomethyl)benzene (I) [65792-44-1], and stirred further. When the above chips were injection molded at 250°, the average plasticization time was 11.0 s, and the number of shots before release problems started (injection time 6 s, cooling time at mold temperature 80° 3 s) 80-90, compared with 10.6 and 15-20 for similar chips treated with Ca stearate in place of I.
IT 65792-44-1
(release agents, containing polyethylene glycol esters, in injection molding of nylon 6)
RN 65792-44-1 HCAPLUS
CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



IC C08L077-00
CC 36-6 (Plastics Manufacture and Processing)
ST polyamide injection molding; nylon injection molding ; release agent bisurea nylon molding; polyethylene glycol ester tackifier
IT Paraffin oils
Siloxanes and Silicones, uses and miscellaneous
(release agents, containing bis(octadecylureidomethyl)benzene, in injection molding of nylon 6)
IT Molding of plastics and rubbers
(injection, of nylon 6, release agents for)
IT 25038-54-4, uses and miscellaneous
(injection molding of, release agents for)
IT 9004-81-3 9005-08-7 9005-64-5
(release agents, containing bis(octadecylureidomethyl)benzene, in injection molding of nylon 6)
IT 65792-44-1
(release agents, containing polyethylene glycol esters, in injection molding of nylon 6)

L48 ANSWER 25 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1978:171165 HCAPLUS Full-text
DOCUMENT NUMBER: 88:171165
ORIGINAL REFERENCE NO.: 88:26990h,26991a
TITLE: Polyamide resin composition
INVENTOR(S): Ohmura, Yasuhiro; Murakami, Yukinobu; Hidaka, Ryoji
PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
SOURCE: Ger. Offen., 23 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 2740092 | A1 | 19780316 | DE 1977-2740092 <-- | 19770906 |
| DE 2740092 | B2 | 19800508 | | |
| DE 2740092 | C3 | 19871022 | | |
| JP 53031759 | A | 19780325 | JP 1976-106530 <-- | 19760906 |
| JP 58025379 | B | 19830527 | | |

PRIORITY APPLN. INFO.: JP 1976-106530 A 19760906 <--

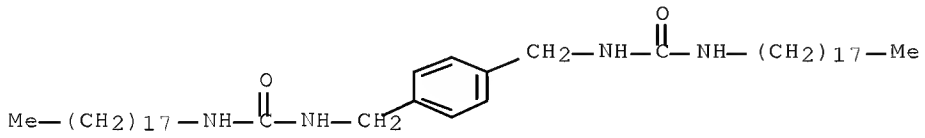
ED Entered STN: 12 May 1984
AB Melamine cyanurate (I) (i.e., reaction product of cyanuric acid and melamine) was mixed with nylon 6 [25038-54-4] to give a fireproofing agent which did not migrate from the polymer during molding or aging. In some cases, the nylon 6-I mixts. were mixed with CuCl, KI, and SnCl2 for improved heat

resistance, with an alkylenebisstearamide for improved dispersion of the I, or with a bisureido compound as a lubricant for improved molding. Thus, a mixture 94% nylon 6 and 6% I had good fire resistance (V-O in UL 94 test).

IT 65792-44-1
(lubricants, polyamides containing melamine cyanurate fireproofing agent and, for improved molding)

RN 65792-44-1 HCAPLUS

CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



IC C08L077-00

CC 36-6 (Plastics Manufacture and Processing)

IT 65792-44-1
(lubricants, polyamides containing melamine cyanurate fireproofing agent and, for improved molding)

L48 ANSWER 26 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1978:106248 HCAPLUS Full-text

DOCUMENT NUMBER: 88:106248

ORIGINAL REFERENCE NO.: 88:16677a,16680a

TITLE: Thermoplastic resin compositions

INVENTOR(S): Omura, Yasuhiro; Miyoshi, Masanori; Irie, Hiroyuki; Koga, Norimichi

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 52119654 | A | 19771007 | JP 1976-36612 <-- | 19760401 |
| JP 53039458 | B | 19781021 | | |

PRIORITY APPLN. INFO.: JP 1976-36612 A 19760401 <--

ED Entered STN: 12 May 1984

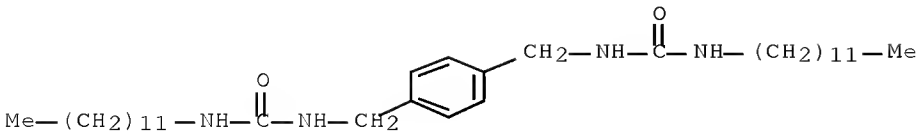
AB Molded plastics, with improved mold releasability, were prepared by blending a urea compound with a thermoplastic resin and molding the blend. Thus, a blend of poly(butylene terephthalate) (I) [24968-12-5] containing 0.05% (based on I) 1,4-bis[(3-octadecylureido)methyl]benzene [65792-44-1] was injection molded to give a product with good mold releasability, whereas mold releasability was poor for a product molded from I only.

IT 65792-45-2
(release agents, for molding of polyamides)

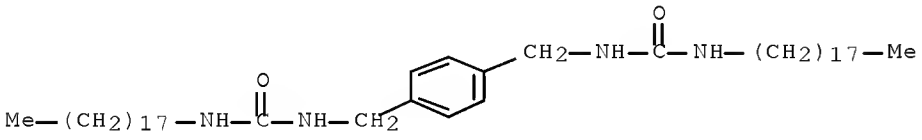
RN 65792-45-2 HCAPLUS

CN Urea, N,N''-[1,4-phenylenebis(methylene)]bis[N'-dodecyl- (9CI) (CA

INDEX NAME)



IT 65792-44-1
(release agents, for molding of polycarbonates or polyamides)
RN 65792-44-1 HCAPLUS
CN Urea, N-octadecyl-N'-[[4-[[[(octadecylamino)carbonyl]amino]methyl]phenyl]methyl]- (CA INDEX NAME)



IC C08K005-21
CC 36-6 (Plastics Manufacture and Processing)
ST urea compd release agent; molded plastic releasability; polyester molded releasability; bisoctadecylureidomethylbenzene release agent
IT Polycarbonates
Polyesters, uses and miscellaneous
(molding of, release agents for, urea derivs. as)
IT Molding of plastics and rubbers
(of polycarbonates, polysesters or polyamides, release agents for, urea compds. as)
IT 24936-68-3 24968-12-5 25038-54-4, uses and miscellaneous
25971-63-5 26062-94-2
(molding of, release agents for, urea derivs. as)
IT 65792-45-2
(release agents, for molding of polyamides)
IT 65792-47-4
(release agents, for molding of polycarbonates)
IT 65792-44-1
(release agents, for molding of polycarbonates or polyamides)
IT 65792-43-0
(release agents, for molding of polyesters)
IT 65792-46-3
(release agents, for molding of polyesters or polyamides)
IT 65792-42-9
(release agents, for molding of polyesters or polycarbonates)

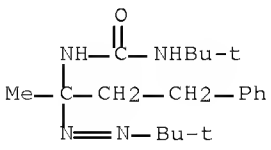
L48 ANSWER 27 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1977:503033 HCAPLUS Full-text
DOCUMENT NUMBER: 87:103033
ORIGINAL REFERENCE NO.: 87:16381a,16384a
TITLE: α-Isocyanato and α-isothiocyanato azos and their derivatives
INVENTOR(S): Lange, Harold Carl; MacLeay, Ronald Edward
PATENT ASSIGNEE(S): Pennwalt Corp., USA
SOURCE: U.S., 29 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 4028344 | A | 19770607 | US 1974-453452 <-- | 19740321 |
| PRIORITY APPLN. INFO.: | | | US 1974-453452 <-- | 19740321 |

ED Entered STN: 12 May 1984

AB α-Isocyanato and α-isothiocyanatoazoalkane derivs. were prepared as blowing agents for polyester resins. Thus, 1 mol Me iso-Bu ketone tert-butylhydrazone [32818-94-3] and 1.05 mol Et3N in 800 mL pentane were treated with 1 mol Cl at -10 to 0° to give 90.5% yield of 2-tert-butylazo-2-chloro-4-methylpentane [25143-28-6] which was added to an equimolar amount of NaSCN in 75% aqueous iso-PrOH at 5°, maintained at 10-20°, and stirred 2 h at 30° to give 80% yield of 2-tert-butylazo-2-isothiocyanato-4-methylpentane (I) [63805-96-9]. Stirring 0.1 mol I with 0.105 mol BuNH2 [109-73-9] for 3 h at 30° gave 100% yield of N-[1-(tert-butylazo)-1,3-dimethylbutyl]-N'-butylthiourea [57909-77-0] which (2 g) was added to 10 g of a mixture of 7 parts maleic anhydride-phthalic anhydride-propylene glycol copolymer [25037-66-5] containing 0.013% hydroquinone and 3 parts styrene, stirred 30 s and poured into a glass beaker at room temperature and allowed to foam and cure. The foam d. was 0.65 g/cm3.

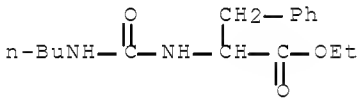
IT 57909-96-3P
(preparation of, as blowing agents for polyester resins)
RN 57909-96-3 HCAPLUS
CN Urea, N-(1,1-dimethylethyl)-N'-[1-[2-(1,1-dimethylethyl)diazenyl]-1-methyl-3-phenylpropyl]- (CA INDEX NAME)



IC C07C107-02
INCL 260174000
CC 36-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 23
IT 57909-72-5P 57909-76-9P 57909-77-0P 57909-83-8P 57909-89-4P
57909-90-7P 57909-92-9P 57909-93-0P 57909-94-1P
57909-96-3P 57909-99-6P 57910-09-5P 57910-10-8P

57910-11-9P 57910-12-0P
(preparation of, as blowing agents for polyester resins)

L48 ANSWER 28 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1964:30890 HCAPLUS Full-text
DOCUMENT NUMBER: 60:30890
ORIGINAL REFERENCE NO.: 60:5478a-c
TITLE: Preparation of hypoglycemic activity of some 3,5-disubstituted hydantoins
AUTHOR(S): Lombardino, Joseph G.; Gerber, Clifford F.
CORPORATE SOURCE: Chas. Pfizer & Co., Inc., Groton, CT
SOURCE: Journal of Medicinal Chemistry (1964), 7(1), 97-101
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
ED Entered STN: 22 Apr 2001
AB Some new 3,5-disubstituted hydantoins were prepared for testing as hypoglycemic agents. In addition, some L-5-[4(or 5)imidazolylmethyl]hydantoins and L-5[4(or 5)imidazolylmethyl]thiohydantoins, prepared by reaction of L-histidine Me ester with various isocyanates, are described and their phys. and pharmacol. properties discussed. An explanation is offered for the observed increased acidity of these imidazoles over that of other alkylimidazoles. Four new isocyanates were prepared and characterized in the course of this work. Although a modest level of hypoglycemic activity was observed in the rat by the oral route, no activity was found on administration to guinea pigs or dogs.
IT 93142-89-3P, Alanine, N-(butylcarbamoyl)-3-phenyl-, ethyl ester
(preparation of)
RN 93142-89-3 HCAPLUS
CN Alanine, N-(butylcarbamoyl)-3-phenyl-, ethyl ester (7CI) (CA INDEX NAME)



CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))
IT 75-13-8P, Isocyanic acid, esters with Et 2-hydroxy-4-methylvalerate 75-13-8P, Isocyanic acid, esters with Et lactate 75-13-8P, Isocyanic acid, esters with Et 3-phenyllactate 1548-13-6P, Isocyanic acid, α,α,α-trifluoro-p-tolyl ester 1943-84-6P, Isocyanic acid, hexadecyl ester 2317-30-8P, Carbanilide, 4-chloro-4'-(trifluoromethyl)- 3158-26-7P, Isocyanic acid, octyl ester 5006-92-8P, Urea, 1-(p-chlorophenyl)-3-octyl- 5835-68-7P, Hydantoin, 5-[imidazol-4(or 5)-ylmethyl]-3-phenyl-2-thio- 6312-93-2P, Urea, 1-(p-chlorophenyl)-3-hexadecyl- 6821-48-3P, Hydantoin, 5-[imidazol-4(or 5)-ylmethyl]-3-(α,α,α-trifluoro-p-tolyl)-, hydrochloride 7684-21-1P, Alanine, N-(phenylcarbamoyl)-, ethyl ester 10122-67-5P, Histidine, N-[(α,α,α-trifluoro-p-tolyl)carbamoyl]-, methyl ester 13794-28-0P, Lactic acid, ethyl ester, isocyanate 33558-00-8P, Hydantoin, 5-methyl-3-phenyl- 56012-09-0P,

Hydantoin, 3-(p-chlorophenyl)-5-methyl- 71532-37-1P, Hydantoin, 5-benzyl-3-p-tolyl- 84370-87-6P, Isocyanic acid, 2,4-dimethoxyphenyl ester 87543-80-4P, Hydrocinnamic acid, α-isocyanato-, ethyl ester 90009-70-4P, Histidine, N-[(carboxymethyl)carbamoyl]-, N-ethyl Me ester 90349-41-0P, Benzoyl azide, 2,4-dimethoxy- 90609-13-5P, Valeric acid, 2-isocyanato-4-methyl-, ethyl ester 91253-31-5P, Histidine, N-(propylcarbamoyl)-, methyl ester 91350-78-6P, Hydantoin, 5-methyl-3-p-tolyl- 91557-87-8P, Benzoic acid, 2,4-dimethoxy-, isopropylidenehydrazide 91695-74-8P, Hydantoin, 5-methyl-3-octyl- 91767-11-2P, Alanine, N-[(p-chlorophenyl)carbamoyl]-, ethyl ester 91911-70-5P, Hydantoin, 3-(p-chlorophenyl)-5-isobutyl- 92033-48-2P, Alanine, N-(p-tolylcarbamoyl)-, ethyl ester 92194-44-0P, Histidine, N-[(p-bromophenyl)carbamoyl]-, methyl ester 92194-76-8P, Histidine, N-[(o-chlorophenyl)carbamoyl]-, methyl ester 92194-77-9P, Histidine, N-[(p-chlorophenyl)carbamoyl]-, methyl ester 92253-64-0P, Histidine, N-[(2,5-dichlorophenyl)carbamoyl]-, methyl ester 92292-75-6P, Hydantoin, 5-benzyl-3-butyl- 92292-76-7P, Hydantoin, 5-isobutyl-3-p-tolyl- 92296-43-0P, Histidine, N-(phenylcarbamoyl)-, methyl ester 92326-60-8P, Alanine, N-(octylcarbamoyl)-, ethyl ester 92494-15-0P, Histidine, N-(cyclohexylcarbamoyl)-, methyl ester 92551-51-4P, Carbanilide, 4'-chloro-2,4-dimethoxy- 92649-02-0P, Hydantoin, 3-(3,4-dimethoxyphenyl)-5-isobutyl- 92699-73-5P, Leucine, N-[(p-chlorophenyl)carbamoyl]-, ethyl ester 92794-04-2P, Hydantoin, 5-isobutyl-3-octyl- 92871-14-2P, Histidine, N-(p-tolylcarbamoyl)-, methyl ester 93142-89-3P, Alanine, N-(butylcarbamoyl)-3-phenyl-, ethyl ester 93142-99-5P, Leucine, N-(p-tolylcarbamoyl)-, ethyl ester 93144-40-2P, Histidine, N-(octylcarbamoyl)-, methyl ester 93539-46-9P, Histidine, N-[(2,4-dimethoxyphenyl)carbamoyl]-, methyl ester 93814-75-6P, Leucine, N-[(3,4-dimethoxyphenyl)carbamoyl]-, ethyl ester 93879-94-8P, Hydantoin, 5-benzyl-3-(3,4-dimethoxyphenyl)- 93994-45-7P, Alanine, N-[(p-chlorophenyl)carbamoyl]-3-phenyl-, ethyl ester 94206-91-4P, Hydantoin, 5-benzyl-3-(p-chlorophenyl)- 94309-35-0P, Alanine, 3-phenyl-N-(p-tolylcarbamoyl)-, ethyl ester 94679-92-2P, Alanine, N-[(3,4-dimethoxyphenyl)carbamoyl]-3-phenyl-, ethyl ester 94733-94-5P, Hydantoin, 5-[imidazol-4(or 5)-ylmethyl]-3-propyl-, hydrochloride 95746-11-5P, Histidine, N-(hexadecylcarbamoyl)-, methyl ester 96247-80-2P, Hydantoin, 5-[imidazol-4(or 5)-ylmethyl]-3-phenyl-, hydrochloride 96311-32-9P, Hydantoin, 3-(p-chlorophenyl)-5-[imidazol-4(or 5)-ylmethyl]-, hydrochloride 96486-99-6P, Hydantoin, 3-(p-bromophenyl)-5-[imidazol-4(or 5)-ylmethyl]-, hydrochloride 96534-55-3P, Hydantoin, 3-cyclohexyl-5-[imidazol-4(or 5)-yl-methyl]-, hydrochloride 96635-09-5P, Hydantoin, 3-butyl-5-[imidazol-4(or 5)-ylmethyl]-2-thio- 96654-22-7P, Hydantoin, 3-butyl-5-[imidazol-4(or 5)-ylmethyl]-, hydrochloride 96771-15-2P, Pseudourea, 3,3'-hexamethylenebis[2-(2-cyanoethyl)-1-phenyl-2-thio-, dihydrochloride 97076-47-6P, Pseudourea, 3,3'-hexamethylenebis[2-(1-naphthylmethyl)-2-thio-, dihydrochloride 97153-73-6P, Pseudourea, 3,3'-hexamethylenebis[2-(carbamoylmethyl)-1-phenyl-2-thio-, dihydrochloride 97193-37-8P, Hydantoin, 5-[imidazol-4(or 5)-ylmethyl]-3-(p-methoxyphenyl)-, hydrochloride 97237-00-8P, Hydantoin, 3-heptyl-5-[imidazol-4(or 5)-ylmethyl]-2-thio- 97499-60-0P, Hydantoin, 5-[imidazol-4(or 5)-ylmethyl]-3-p-tolyl-, hydrochloride 97738-04-0P, Hydantoin, 5-[imidazol-4(or 5)-ylmethyl]-3-octyl-, hydrochloride 97924-79-3P, Pseudourea, 3,3'-hexamethylenebis[2-(1-naphthylmethyl)-1-phenyl-2-thio-, dihydrochloride 101174-71-4P, Hydantoin, 3-hexadecyl-5-[imidazol-4(or 5)-ylmethyl]-, hydrochloride

101633-18-5P, Isosemicarbazide,
4,4'-hexamethylenebis[3-benzyl-3-thio-, dihydrochloride 858865-17-5P
, p-Cresol, α,α,α-trifluoro-, isocyanate
909889-73-2P, Histidine, N-(butylcarbamoyl)-, methyl ester
(preparation of)

L48 ANSWER 29 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1947:11849 HCAPLUS Full-text
DOCUMENT NUMBER: 41:11849
ORIGINAL REFERENCE NO.: 41:2413h-i,2414a-i,2415a-i,2416a-h
TITLE: Action of alkali on several C,N- and C,N,N'-substituted 5-bromobarbituric acids
AUTHOR(S): Aspelund, Helge
CORPORATE SOURCE: Abo Akad., Finland
SOURCE: Acta Acad. Aboensis, Math. et Phys. (1940), Volume Date 1939, 12(No. 5), 33 pp.
DOCUMENT TYPE: Journal
LANGUAGE: German
ED Entered STN: 22 Apr 2001
GI For diagram(s), see printed CA Issue.
AB cf. C.A. 33, 6801.8, and successive abstrs. When 4.2 g. 5-bromo-5-benzylbarbituric acid (I) was allowed to stand overnight with 14.3 cc. N NaOH, 0.54 g. 1-(α,α-dibromo-β- phenylpropionyl)-3-methylurea, PhCH2CBr2CONH-CONHMe, m. 174-5° (from alc.), was obtained. The mother liquors yielded, besides I, 1-(α-bromo-β-phenyl-propionyl)-3-methylurea (II) and 5-benzyl-3-methylbarbituric acid. II (1 g.) suspended in 5 cc. H2O was heated 3 min. with 6 cc. N NaOH, cooled, acidified with 0.6 cc.N HCl, and extracted with Et2O. The aqueous layer was treated with 1 cc. N HCl, thus yielding 60 mg. PhCH:CHCO2H, and the mother liquor was extracted again with Et2O and the aqueous solution treated with excess 1.5 N HCl and re-extracted with Et2O, the latter extract yielding PhCH2CH(OH)CO2H (III), m. 97-8° (from C6H6). Previously, A. had shown that alc. KOH and II gave an unidentified product, m. 194-6°. This, on recrystn, from alc., m. 199-200°, and the compound (IV), C11H12O2N2, appears to be an isomer of O.C(:NMe).NH.CO.CHCH2Ph (V), which is the main product of the above reaction. IV is not the expected 5-benzyl-1-methylhydantoin (cf. Nicolet and Campbell, C.A. 22, 1958). PhCH2CHBrCONHCONH2 (1 g.) in 5 cc. H2O was heated 3 min. with 7.4 cc. N NaOH, cooled, and neutralized with 1.5 cc. N HCl, yielding 35 mg. 2-imino-5-benzyl-4-oxooxazolidine, m. 241-2°, the mother liquor from which, on further acidification, gave 0.14 g. PhCH:CHCO2H and, on Et2O extraction, a small amount of III. On heating 0.25 g. V in 5 cc. H2O with 1.2 cc. N NaOH.1.1 h., acidifying with 0.5 cc. N HCl, and extracting with Et2O, this extract yielded 70 mg. PhCH2CH(OH)CONHMe, m. 112-13° (from C6H6). The residual aqueous solution when treated with 0.3 cc. N HCl and extracted with Et2O yielded 20 mg. O.CO.NH.CO.CHCH2Ph, m. 97-8° (from H2O). The 18-h. interaction of 2.9 cc. N NaOH and 1 g. 5-bromo-5-benzyl-1-phenylbarbituric acid (VI) at room temperature yielded 260 mg. 1-(α,α-dibromo-β-phenylpropionyl)-3- phenylurea, m. 151-2° (from alc.), whose mother liquors after standing 2 days yielded 220 mg. 1-(α-bromo-β-phenylpropionyl)-3-phenylurea, PhCH2CHBrCONHCONHPh, m. 143° (from alc.). The same products were obtained when VI was heated 40 min. with aqueous (NH4)2CO3. When treated 30 min. at room temperature and then heated 3 min. with 5 cc. H2O and 8 cc. N NaOH, 1 g. VI gave 160 mg. O.C(: NPh). NH.CO.CHCH2Ph (VII), m. 217-19° (although elsewhere in the article A. gives m.ps. of this compound up to 222°), and, in the filtrate, 5-benzyl-1-phenylhydantoin (VIII), m. 207-8° (from alc.). The synthesis of 680 mg. VIII was effected by heating 1 g. PhCH2CHBrCONHCONH2 2 h. at 160° with 1.45 g. PhNH2, treating the melt with HCl, washing with Et2O and H2O, and recrystg. from alc. Similarly, VIII could also be formed from PhCH2CHBrCONHCONHPh and PhNH2. When 0.1 g. VIII was heated 0.5 h. with 5 cc. 10% H2SO4, PhNHCONH2

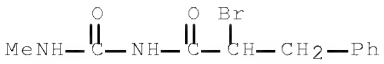
(extracted with Et2O) and appreciable amts. of VII (after acidification with 3 cc. N HCl) were formed. When 2.1 g. VI was treated with an excess (3 equivs.) of N NaOH, and the resulting VII and VIII removed, the filtrate, with 4 cc. N HCl, gave 0.47 g. PhCH2C(CO2Na).CO.NH.C(:NPh).O (IX) (the mother liquors from which were still slightly alkaline). When 0.2 g. IX suspended in H2O was treated with 0.6 cc. N HCl, 0.12 g. VII was formed. Evidently, IX is stable, but the corresponding acid decompose rapidly to form VII. PhCH2CHBrCONHCONHPh (1 g.) was suspended in 5.8 cc. N NaOH 15 min., boiled 3.5 min., cooled, and extracted with Et2O (which removed 70 mg. PhNHCONH2), and the aqueous solution was acidified with 1 cc. N HCl, yielding 0.1 g. VII, the mother liquor from which gave 0.11 g. VIII. VII (0.25 g.) heated 3.5 h. with 5 cc. H2O and 0.95 cc. N NaOH yielded 20 mg. PhCH2CH(OH)CONHPh, m. 137-8°. The filtrate, neutralized with 0.25 cc. N HCl, gave 30 mg. PhNHCONH2 (extracted with Et2O) and, after acidification of the aqueous solution with 0.7 cc. N HCl, 55 mg. PhCH2CH(OCONHPh)CO2H (X), m. 156-7°, whose mother liquor, when re-extracted with Et2O, yielded III. In another similar experiment, in which VII was heated only 0.5 h., most of the starting material was recovered and only about 10% of a mixture of III and X were obtained. By heating 0.1 g. VII with 2 cc. EtOH and 1 cc. concentrated HCl I min., followed by rapid cooling, and extraction with Et2O, 60 mg. PhCH2CH.CO.NH.CO.O was formed. 5-Bromo-5-ethyl-1-phenylbarbituric acid (3 g.) in 15 cc. H2O was suspended in 29.4 cc. N NaOH 0.5 h. and then heated 2 min., cooled, and extracted with Et2O, yielding 0.22 g. PhNHCONH2 and 0.22 g. 5-ethyl-1-phenylhydantoin (XI), m. 169-70° (from C6H6). The main aqueous solution when neutralized with 8 cc. N HCl gave 60 mg. XI, the filtrate from which on Et2O extraction and acidification of the aqueous layer with 2 cc. concentrated HCl yielded 0.43 g. 2-phenylimino-5-ethyl-4-oxooxazolidine (XII), m. 167-70° (in another experiment, 175-6°). The intermediate 2-phenylimino-5-ethyl-4-oxo-5-oxazolidinecarboxylic acid is evidently very unstable and could not be isolated. Heating the mixture of XI and XII 15 min. with 10% H2SO4 leaves XI unchanged but converts XII into 5-ethyl-2,4-dioxooxazolidine, Et-CH.CO.NH.CO.O, m. 55-6°, which is H2O-soluble, and thus furnishes a means of obtaining pure (H2O-insol.) XI. XI was also obtained in small amount when KOH in alc. acted upon EtCHBrCONHCONHPh, and in good yield by condensing PhNH2 with either EtCHBrCONHCONH2 or EtCHBrCONHCONHMe. XII, when heated 1.66 h. with an equimol. amount of NaOH in 12.9 cc. H2O, followed by Et2O extraction, evaporation of the extract, and acidification with aqueous HCl gave about 15% EtCH(OH)CONHPh, m. 89-90° (from aqueous MeOH). The aqueous mother liquor was slightly acidified with N HCl and extracted with Et2O. The aqueous solution, further acidified with 1.5 cc. N HCl, yielded about 160 mg. MeCH2CH(OCONHPh)CO2H, m. 118-20° (decomposition). By heating 1 g. 2-methylimino-5-ethyl-4-oxooxazolidine in 10 cc. H2O with 7 cc. N NaOH 50 min., extracting the solution with Et2O (which removed very little), acidifying the solution with 5 cc. N HCl, and re-extracting with Et2O, this extract yielded 370 mg. 5-ethyl-2,4-dioxooxazolidine, m. 55-6°, the aqueous mother liquor from which, when acidified further with 3 cc. N HCl followed by Et2O extraction, yielded 40 mg: MeCH2CH(OCONH2)CO2H, m. 126-7° (decomposition). MeCHBrCONHCONHPh (cf. Frerichs and Hollmann, Arch. Pharm. 243, 688(1905)) (2 g.) was heated 2 min. with 14.8 cc. N NaOH, cooled, and filtered, giving 440 mg. PhNHCONH2. With 2.5 cc. N HCl, the mother liquor yielded about 0.1 g. 2-phenyl-5-methyl-4-oxooxazolidine (XIII), m. 198-9° (from alc.), and, on dilution with H2O, small amts. of 5-methyl-1-phenylhydantoin, m. 145° (from alc.), more of which was obtained when the mother liquors were extracted with Et2O (to remove PhNHCONH2) and neutralized with 1.5 cc. N HCl. When in the foregoing reaction alc. KOH was used, XIII was the principal product. When 20 g. 1,5-diphenylbarbituric acid was heated on a steam bath with the calculated amount of Br in CHCl3, there was formed the 5-Br derivative (XIV), m. 158-8.5° (from alc.), 10 g. of which, heated 2.5 min. in 50 cc. H2O and 82 cc. 1.1 N NaOH, gave 3.18 g. 2-phenylimino-5-phenyl-4-oxooxazolidine (XV), m. 219° (from alc.). The filtrate, after Et2O extraction, was treated with 32 cc. N HCl, yielding about 1.6 g. 1,5-

diphenylhydantoin (XVI), m. 204° (from alc.). XIV was also subjected to a series of somewhat modified alkaline treatments and XV and XVI were obtained in varying amts., together with small amts. of unidentified halogen-free products. By gradually adding 5 g. PhCHClCOCl in dry Et2O to 3.6 g. PhNHCONH2 in Et2O, followed by heating 15 min. under reflux, A. obtained 1-(phenylchloro-acetyl)-3-phenylurea, m. 198-9° (from alc.), which, on similar alkaline treatment, also gave rise to XV and XVI, together with small amts. of mandelic acid. By treating PhCHClCOCl with urea, A. obtained (phenyl-chloroacetyl)urea (XVII) which when heated with PhNH2 gave XVI. By heating 0.5 g. XVII with 4.7 cc. N NaOH 1.5 min., 90 mg. PhCH.CO.NH.C(:NH).O, m. 242-3°, and about 50 mg. PhCH.CO.NH.CO.O, m. 104-5° (given elsewhere as 107°), were formed. The latter was also obtained by heating PhCH.CO.NH.C(:NH).O with aqueous HCl. XV (1 g.) in 16 cc. H2O heated 1.5 h. with 4 cc. N NaOH gave PhCH(OH)CONHPh (extracted with C6H6) and PhNHCONH2 (extracted with Et2O). When rendered strongly acid, the mother liquor gave 0.27 g. PhCH(OCONHPh)CO2H, m. 150-2° and (on Et2O extraction) 0.13 g. mandelic acid. When the previous experiment with XV was repeated, but the alkaline heating period was extended to 3 h., the yields of mandelic acid increased, whereas that of its urethane decreased. Heating with 10% H2SO4 converted XV largely into PhCH.CO.NH.CO.O. By a method analogous to that used in preparing XIV, A. formed 5-bromo-5-phenyl-1-methylbarbituric acid (XVIII), m. 128-9° (from alc.), 2 g. of which, stirred 2 min. with 20.3 cc. N NaOH while covered with Et2O, treated dropwise with 10 cc. N HCl, and extracted with Et2O, gave 0.71 g. 2-methylimino-5-phenyl-4-oxooazolidine (XIX), m. 121-2° (from C6H6), and appreciable amts. of tar. When 10 g. XVIII was heated 3 min. with 100 cc. N NaOH, 1.41 g. XIX was formed. Et2O extraction of the aqueous mother liquor yielded 2.42 g. (impure) PhCH.CO.NH.CO.O. By heating 1 g. XIX with 20 cc. H2O and 4.4 cc. N NaOH 0.5 h., 45 mg. PhCH(OH)CONHMe, m. 94-5°, 0.1 g. PhCH.CO.NH.CO.O, and (after acidification and extraction with Et2O and treatment with C6H6) 0.33 g. mandelic acid urethane, m. 162-4°, were isolated. By heating 0.15 g. XIX with 5 cc. 10% H2SO4, 0.11 g. PhCH.CO.NH.CO.O was obtained. 5-Bromo-5-benzyl-1-phenyl-3-methyl-barbituric acid (XX), C18H15O3N2Br, m. 108° (from alc.-C6H6), was formed by a method analogous to that used in preparing XIV and XVIII. When 3 g. XX was heated 5 min. with 40 cc. absolute alc. containing 0.36 g. Na, followed by dilution with H2O, 5-benzyl-1-phenyl-3-methylhydantoin (XXI), m. 166-7° (from alc.), was obtained. XXI was also formed by shaking 3 g. XX in Et2O with 20 cc. N NaOH, but the mother liquors from XXI yielded small amts. of the isomeric 5-benzyl-1-methyl-3-phenylhydantoin (XXII), large crystals from alc., m. 73-4°. When 1 g. XX in 10 cc. alc. was heated 4 min. with 2.6 cc. N NaOH, extracted with Et2O, this extract shaken with 4 successive 1-cc. portions of N NaOH, and the alkaline exts. rendered slightly acid, a compound, C17H16O3N2 (possibly 5-benzyl-5-hydroxy-1-phenyl-3-methylhydantoin), m. 166-7° (from C6H6), was obtained which showed a marked m.p. depression when mixed with XXI. The synthesis of XXI was effected by treating 5-benzyl-1-phenylhydantoin with Me2SO4 (cf. Biltz and Slotta, C.A. 21, 1794). XXII was prepared by treating 3 g. well-cooled PhCH2CH(NHMe)CO2H in aqueous NaOH with 2.2 g. PhNCO. The (PhNH)2CO was filtered off, the filtrate acidified, the resulting oil heated with 20% HCl, cooled, and the mixture extracted with Et2O. This extract (after washing with aqueous NaOH, drying, evaporating, and recrystg. from alc.) gave 2 g. XXII. The bromination of 4 g. 5-ethyl-1-phenyl-3-methylbarbituric acid gave about 3 g. of the 5-Br derivative, m. 104° (from alc.), 1 g. of which in Et2O, when shaken 10 min. with 61 cc. N NaOH, gave (after extraction with Et2O and acidification of the aqueous solution) 0.45 g. 5-ethyl-1-phenyl-3-methylhydantoin, m. 92-3°; this product was synthesized by methylating 5-ethyl-1-phenylhydantoin with Me2SO4.

IT 859327-31-4P, Urea, 1-(α-bromohydrocinnamoyl)-3-methyl-
859786-21-3P, Urea, 1-(α,α-dibromohydrocinnamoyl)-3-methyl-
(preparation of)

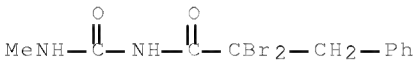
RN 859327-31-4 HCAPLUS

CN Benzenepropanamide, α-bromo-N-[(methylamino)carbonyl]- (CA INDEX NAME)



RN 859786-21-3 HCAPLUS

CN Benzenepropanamide, α,α-dibromo-N-[(methylamino)carbonyl]- (CA INDEX NAME)



CC 10 (Organic Chemistry)

IT 90-64-2P, Mandelic acid 828-01-3P, Lactic acid, 3-phenyl- 2019-72-9P, Mandelamide, N-methyl- 2152-34-3P, 4-Oxazolidinone, 2-imino-5-phenyl- 2933-46-2P, 4-Oxazolidinone, 2-methylimino-5-phenyl- 4264-01-1P, Lactic acid, 3-phenyl-, carbanilate 4410-33-7P, Mandelanilide 5396-14-5P, Cyclohexaneglyoxylic acid, 2-oxo-, ethyl ester 5841-62-3P, 2,4-Oxazolidinedione, 5-benzyl- 5841-63-4P, 2,4-Oxazolidinedione, 5-phenyl- 15900-27-3P, 4-Oxazolidinone, 5-benzyl-2-imino- 15900-32-0P, 4-Oxazolidinone, 5-ethyl-2-phenylimino- 15900-34-2P, 4-Oxazolidinone, 5-benzyl-2-phenylimino- 15900-35-3P, Hydantoin, 5-benzyl-1-phenyl- 15900-36-4P, 4-Oxazolidinone, 5-phenyl-2-phenylimino- 15900-37-5P, Hydantoin, 1,5-diphenyl- 16935-39-0P, Hydantoin, 5-benzyl-5-hydroxy-3-methyl-1-phenyl- 16951-14-7P, Urea, 1-(2-bromobutyryl)-3-methyl- 16951-23-8P, 5-Oxazolidinecarboxylic acid, 5-benzyl-4-oxo-2-phenylimino-, sodium salt 23450-66-0P, Barbituric acid, 5-benzyl-1-methyl- 24856-17-5P, Urea, 1-(2-bromobutyryl)- 25395-28-2P, Urea, (chlorophenylacetyl)- 27362-73-8P, Barbituric acid, 5-benzyl-5-bromo-1-methyl-3-phenyl- 31579-25-6P, Urea, 1-(chlorophenylacetyl)-3-phenyl- 52083-97-3P, Mandelic acid, carbamate 54639-02-0P, Lactanilide, 3-phenyl- 54639-03-1P, Lactamide, N-methyl-3-phenyl- 74348-20-2P, Hydantoin, 5-benzyl-1-methyl-3-phenyl- 89054-93-3P, 2,4-Oxazolidinedione, 5-ethyl- 92554-04-6P, Mandelic acid, carbanilate 105510-41-6P, Hydantoin, 5-methyl-1-phenyl- 106942-24-9P, Butyranilide, 2-hydroxy- 119200-40-7P, Barbituric acid, 5-bromo-1-methyl-5-phenyl- 202118-10-3P, Hydantoin, 5-ethyl-1-phenyl- 301164-45-4P, 4-Oxazolidinone, 5-methyl-2-phenyl- 735202-78-5P, 5-Oxazolidinecarboxylic acid, 5-benzyl-4-oxo-2-phenylimino- 798569-06-9P, 4-Oxazolidinone, 5-ethyl-2-methylimino- 854644-46-5P, Urea, (α-bromohydrocinnamoyl)- 854851-81-3P, Butyric acid, 2-hydroxy-, carbanilate 854851-82-4P, Butyric acid, 2-hydroxy-, carbamate 858203-53-9P, Hydantoin, 5-benzyl-3-methyl-1-phenyl- 858204-95-2P, Hydantoin, 5-ethyl-3-methyl-1-phenyl- 859327-23-4P, Urea, 1-(2-bromopropionyl)-3-phenyl- 859327-30-3P, Urea, 1-(α-bromohydrocinnamoyl)-3-phenyl- 859327-31-4P, Urea, 1-(α-bromohydrocinnamoyl)-3-methyl- 859327-32-5P, Urea,

1-(2-bromobutyryl)-3-phenyl- 859734-56-8P, Urea, 1-(α,α-dibromohydrocinnamoyl)-3-phenyl- 859786-21-3P, Urea, 1-(α,α-dibromohydrocinnamoyl)-3-methyl- 860449-04-3P, Barbituric acid, 5-bromo-5-ethyl-1-methyl-3-phenyl- (preparation of)

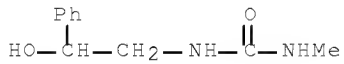
L48 ANSWER 30 OF 30 HCAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1943:39417 HCAPLUS Full-text
DOCUMENT NUMBER: 37:39417
ORIGINAL REFERENCE NO.: 37:6250h-i,6251a-i,6252a
TITLE: Action of alkali on 5-ethyl-1-phenyl-, 1,5-diphenyl-, and 5-phenyl-1-methyldialuric acids
AUTHOR(S): Aspelund, Helge
SOURCE: Acta Acad. Aboensis, Math. et Phys. (1939), 12(No. 2), 32 pp.
From: Chem. Zentr. II, 1120-22(1942).
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
ED Entered STN: 16 Dec 2001
GI For diagram(s), see printed CA Issue.
AB cf. C. A. 33, 8189.7. Oxidation of the corresponding barbituric acid with $H_2O_2$ in the presence of $NaHCO_3$ gave the dialuric acids: 5-ethyl-1-phenyl (I), $C_{12}H_{12}N_2O_4$, m. 234-5° (80% yield); 1,5-diphenyl-(II), $C_{16}H_{12}N_2O_4$, m. 198-9°; and 5-phenyl-1-methyl (III), $C_{11}H_{10}N_2O_4$, m. 168° (89% yield). The acids are readily cleaved with alkali, producing tartronuric acids (Ia, IIa, IIIa), RC(OH)C(CO2H)CONHCONHR', and compds. derived from the isomeric tartronuric acids (Ib, IIb, IIIb), RC(OH)C(CO2H)CONR'CONH2, and from the rearrangement products of the corresponding ureas (Ic, IIc, IIIc), RCH (OH)CONHCONHR'. The tartronuric acids Ia, IIa, IIIa, are not very stable and readily go over to the corresponding ureas with loss of $CO_2$. Ic and IIc are rearranged, by heating in the presence of small amts. of alkali, into the isomeric ureas (Id, IId), RCH(OH)CONR'CONH2. The N'-phenyl substituted ureas (Ic, IIc) are cleaved by excess alkali into $PhNH_2$ and the corresponding 2,4-diketooxazolidines (Ie, IIe, RCH.CO.NH.CO.O. IIIc undergoes this rearrangement to IIIe with a slight excess of alkali and this is doubtless due to the already alkaline nature of the $MeNH_2$ formed in the reaction. The PhCH(OH)CONHMe also formed is probably due to the shift of the Me group from the N to the N' atom. PhCH2C(OH)(CO2H)CONHCONH2 (IVa) on fusion or heating in various solvents gives only 5-benzyl-2,4-diketooxazolidine (IVe). On the other hand, although fusion of EtC(OH)(CO2H)CONHCONH2 (Va) gave only 5-ethyl-2,4-diketooxazolidine (Ve), boiling in toluene produced mainly α-hydroxybutyrylureide (Vc), $C_5H_{10}N_2O_3$, m. 129°. The isomeric ureas, RCH(OH)CONR'CONH2, where R' is Ph, are stable against alkali at room temperature but split off $NH_3$ on heating and yield HO acid anilides together with phenylurethans (If, IIf, IIIf), RCH(CO2H)OCONHPh, probably by cleavage of the previously formed oxazolidines. Boiling IId with dilute $H_2SO_4$ gave (instead of the expected anilide) the urethan IIf, 3,5-diphenyl-2,4-diketooxazolidine (VI) and PhCH(OH)CO2H. In boiling toluene, IIf is rearranged with loss of $CO_2$ into the corresponding anilide (VII). Brief boiling of I with 0.75 equivalent of NaOH gave mainly C-ethyl-N-phenyltartronuric acid (Ib), $C_{12}H_{14}N_2O_6$, m. 123-5°, together with N-α-hydroxybutyryl-N'-phenylurea (Ic) and 5-ethyl-2,4-diketooxazolidine (Ie), m. 52-5°. Long-continued boiling of I with 0.55 equivalent of NaOH gave, together with α-hydroxybutyranilide (VIII), $C_{10}H_{13}NO_2$, m. 90-1° (from petr. ether), Ie and α-hydroxybutyric acid urethan, m. 129-30° (decomposition). VIII, Ie, and Ic are also formed on continued boiling of I in $H_2O$. Ic, $C_{11}H_{14}N_2O_3$, m. 99-100° (from MeOH), is formed from Ib by boiling with $H_2O$, dilute alc. HCl or dilute NaOH; in the latter conversion Ie is a by-product. Id, $C_{11}H_{14}N_2O_3$, m. 147-8° (from $H_2O$), is formed, together with If, $C_{11}H_{13}NO_4$,

m. 119-20° (decomposition), also produced by boiling Id with aqueous NaOH. II, C16H12N2O4, m. 198-9°, on boiling for a short time with 0.09 equivalent of aqueous NaOH formed mainly IIc, C15H14N2O3, m. 144-5° (from benzene). At room temperature II was converted by 1.1 equivs. NaOH into IIc, IIe, and IIb, m. 104-5° (decomposition). IIc was also formed in 80% yields by boiling the corresponding barbituric acid with 0.09 equivalent of NaOH. IIc was transformed by further boiling with NaOH into IId, C15H14N2O3, m. 165-6° (from alc.), together with PhNHCONH2, IIf, IIe and PhCH(OH)CO2H. IIf, mandelic acid phenylurethan, C15H13NO4, m. 152-3°, is formed on heating IId with NaOH or H2SO4 in the presence or absence of alc., together with PhCH(OH)CONHPh, PhNHCONH2, IIe, VI and PhCH(OH)CO2H. III, C11H10N2O4, m. 168°, is converted at room temperature with 1 equivalent NaOH, by loss of CO2, into N-(α-hydroxy-α-phenylacetyl)-N'-methylurea (IIIc). On longer standing with 1.15 equivs. NaOH, only IIe is produced. IIc also results from boiling III in NaOH. In boiling H2O, III is decomposed into IIe, mandelic acid methylamide, C9H11NO2, m. 97-8°, and mandelic acid urethan. Brief boiling of III with 0.025 equivalent NaOH gave IIIc, C10H12N2O3, m. 150° (from alc.). Boiling IIIc with 0.4 equivalent of aqueous NaOH gave IIe, together with PhCH(OH)CONHMe and a compound, m. 111-12°. Condensation of EtCH(OH)CO2Et with PhNCO at 135° gave α-hydroxybutyric acid phenylurethan (If), decomposed by boiling with N HCl or N NaOH to 5-ethyl-3-phenyl-2,4-diketooxazolidine, C11H11NO3, m. 88°, together with EtCH(OH)CONHPh, m. 89°, and some H2NCONHPh. Mandelic acid phenylurethan, m. 149-50°, was formed by the condensation of PhCH(OH)CO2Et with PhNCO at 135° and saponification of the ester, C17H17NO4, m. 94-5°, together with VI, C15H11NO3, m. 122-3°; PhCH(OH)CONHPh and some H2NCONPh2. The urethan was converted to VI by boiling with H2O. Boiling the NH4 salt of the urethan with toluene gave PhCH(OH)CONHPh, m. 144-5°. On boiling with H2O, β-phenyllactic acid urethan (IX) was converted into β-phenyllactic acid (X), m. 91-3°, whereas boiling with toluene or xylene gave β-phenyllactamide, m. 112-13°; IVe, m. 99-100°; and X. By boiling in 20% alc., IX was transformed to 5-benzyl-3-phenyl-2,4-diketooxazolidine, m. 150-1°.

IT 854655-76-8P, Urea, 1-mandelyl-3-methyl-
(preparation of)

RN 854655-76-8 HCAPLUS

CN Urea, N-(2-hydroxy-2-phenylethyl)-N'-methyl- (CA INDEX NAME)



CC 10 (Organic Chemistry)

IT 64-10-8P, Urea, phenyl- 603-54-3P, Urea, 1,1-diphenyl- 705-59-9P, Lactamide, β-phenyl- 828-01-3P, Lactic acid, β-phenyl- 2019-72-9P, Mandelamide, N-methyl- 4195-32-8P, 2,4-Oxazolidinedione, 5-benzyl-3-phenyl- 4410-33-7P, Mandelanilide 5841-62-3P, 2,4-Oxazolidinedione, 5-benzyl- 5841-63-4P, 2,4-Oxazolidinedione, 5-phenyl- 17767-81-6P, 2,4-Oxazolidinedione, 3,5-diphenyl- 22458-17-9P, Dialuric acid, 5-ethyl-1-phenyl- 22458-19-1P, Dialuric acid, 1,5-diphenyl- 22458-23-7P, Dialuric acid, 1-methyl-5-phenyl- 22458-26-0P, Tartronuric acid, α-ethyl-ε-phenyl- 24423-37-8P, Urea, 1-(α-hydroxybutyryl)-1-phenyl- 24433-92-9P, Urea, 1-(α-hydroxybutyryl)- 24433-95-2P, Urea, 1-(α-hydroxybutyryl)-3-phenyl- 27770-23-6P, 2,4-Oxazolidinedione, 5-methyl- 56533-18-7P, Urea,

```
=> d his nofile

     (FILE 'HOME' ENTERED AT 13:47:39 ON 12 MAY 2009)

     FILE 'HCAPLUS' ENTERED AT 13:47:57 ON 12 MAY 2009
L1             1 SEA SPE=ON  ABB=ON  PLU=ON  US20080097074/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 13:48:10 ON 12 MAY 2009
L2            10 SEA SPE=ON  ABB=ON  PLU=ON  (135796-12-2/BI OR 25038-75-9/B
                 I OR 26023-30-3/BI OR 26161-42-2/BI OR 26811-96-1/BI OR
                 26917-25-9/BI OR 33135-50-1/BI OR 65792-44-1/BI OR
                 840501-68-0/BI OR 840501-69-1/BI)
L3               STR
L4            39 SEA SSS SAM L3
L5               STR L3
L6            11 SEA SSS SAM L5
L7          6050 SEA SSS FUL L5
L8             1 SEA SPE=ON  ABB=ON  PLU=ON  L7 AND L2
                 E POLYLACTIC/CN
L9             1 SEA SPE=ON  ABB=ON  PLU=ON  "POLYLACTIC ACID"/CN
L10           94 SEA SPE=ON  ABB=ON  PLU=ON  26100-51-6/CRN
L11            0 SEA SPE=ON  ABB=ON  PLU=ON  L10 AND L2
L12            1 SEA SPE=ON  ABB=ON  PLU=ON  L2 AND  PROPANOIC ACID
L13          832 SEA SPE=ON  ABB=ON  PLU=ON  79-33-4/CRN
                 SAV L7 BER471/A

     FILE 'HCAPLUS' ENTERED AT 13:57:02 ON 12 MAY 2009
L14         1134 SEA SPE=ON  ABB=ON  PLU=ON  L7
L15          178 SEA SPE=ON  ABB=ON  PLU=ON  L10
L16         5859 SEA SPE=ON  ABB=ON  PLU=ON  L13
L17            3 SEA SPE=ON  ABB=ON  PLU=ON  L14 AND (L15 OR L16)
L18            2 SEA SPE=ON  ABB=ON  PLU=ON  L14 AND POLYLACTIC ACID?

     FILE 'REGISTRY' ENTERED AT 14:07:15 ON 12 MAY 2009
L19            9 SEA SPE=ON  ABB=ON  PLU=ON  L7 AND PMS/CI
L20              STR L5
L21           50 SEA SUB=L7 SSS SAM L20
L22         5848 SEA SUB=L7 SSS FUL L20
                 SAV L22 BER471A/A
L23         1313 SEA SPE=ON  ABB=ON  PLU=ON  L22 AND 1/NR
L24            1 SEA SPE=ON  ABB=ON  PLU=ON  L23 AND L2

     FILE 'HCAPLUS' ENTERED AT 14:10:18 ON 12 MAY 2009
L25          617 SEA SPE=ON  ABB=ON  PLU=ON  L23
L26            1 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND L1
                 E  BIODEGRADABLE MATERIALS/CT
L27        15623 SEA SPE=ON  ABB=ON  PLU=ON  "BIODEGRADABLE MATERIALS"+PFT,N
                 T/CT
                 E  MOLDED PLASTICS, USES/CT
L28        13745 SEA SPE=ON  ABB=ON  PLU=ON  "MOLDED PLASTICS, USES"+PFT,NT/
                 CT
L29            2 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND L27
L30            1 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND L28
L31            8 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND POF/RL
L32            8 SEA SPE=ON  ABB=ON  PLU=ON  (L29 OR L30 OR L31)
L33           14 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND MOLD?
L34           14 SEA SPE=ON  ABB=ON  PLU=ON  L25 AND (MOLD? OR MOULD?)
```

| | | | | | | |
|---|---|---|---|---|---|---|
| L35 | 14 | SEA | SPE=ON | ABB=ON | PLU=ON | L33 OR L34 |
| L36 | 1 | SEA | SPE=ON | ABB=ON | PLU=ON | L35 AND L1 |
| L37 | 7 | SEA | SPE=ON | ABB=ON | PLU=ON | L25 AND LACTIC ACID? |
| L38 | 8 | SEA | SPE=ON | ABB=ON | PLU=ON | L17 OR L18 OR L37 |
| L39 | 19 | SEA | SPE=ON | ABB=ON | PLU=ON | L35 OR L38 |
| L40 | 18 | SEA | SPE=ON | ABB=ON | PLU=ON | L39 AND (1840-2006)/PRY,AY,PY |
| L41 | 2 | SEA | SPE=ON | ABB=ON | PLU=ON | L25 AND (BIODEGRAD? OR BIO DEGRAD?)(3A) MATERIAL? |
| L42 | 18 | SEA | SPE=ON | ABB=ON | PLU=ON | L40 OR L41 |
| L43 | 1 | SEA | SPE=ON | ABB=ON | PLU=ON | L25 AND STEREOCOMPLEX? |
| L44 | 480 | SEA | SPE=ON | ABB=ON | PLU=ON | L25 AND PREP/RL |
| L45 | 403 | SEA | SPE=ON | ABB=ON | PLU=ON | L25(L)PREP/RL |
| L46 | 12 | SEA | SPE=ON | ABB=ON | PLU=ON | L45 AND (PLASTIC? OR POLYMER?)/SC,SX |
| L47 | 12 | SEA | SPE=ON | ABB=ON | PLU=ON | L46 AND (1840-2006)/PRY,AY,PY |
| L48 | 30 | SEA | SPE=ON | ABB=ON | PLU=ON | L42 OR L47 |
| L49 | 1 | SEA | SPE=ON | ABB=ON | PLU=ON | L48 AND L1 |